

# SEARCH REQUEST FORM

## Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 8-23-06  
 Art Unit: 1752 Phone Number 36 2-1333 Serial Number: 10/812,125  
 Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL  
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: P/Z. See B7b SCIENTIFIC REFERENCE BR  
 Sci Tech Inf. Ctr

Inventors (please provide full names): \_\_\_\_\_

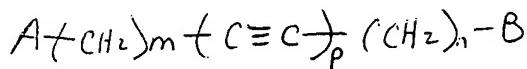
AUG 21 2006

Earliest Priority Filing Date: \_\_\_\_\_

Pat. & T.M. Office

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for ██████████  
 a metal salt of the following monomer.



I see cl. #8 attached for  
 the definitions of  
 variables)

<b>STAFF USE ONLY</b>		Type of Search	Vendors and cost where applicable
Searcher:	<u>JW</u>	NA Sequence (#)	STN <input checked="" type="checkbox"/>
Searcher Phone #:	<u>022504</u>	AA Sequence (#)	Dialog _____
Searcher Location:		Structure (#)	Questel/Orbit _____
Date Searcher Picked Up:	<u>8/28/06</u>	Bibliographic	Dr. Link _____
Date Completed:	<u>8/29/06</u>	Litigation	Lexis/Nexis _____
Searcher Prep & Review Time:		Fulltext	Sequence Systems _____
Clerical Prep Time:	<u>15</u>	Patent Family	WWW/Internet _____
Online Time:	<u>545</u>	Other	Other (specify) _____

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FILE 'REGISTRY' ENTERED AT 09:12:28 ON 28 AUG 2006  
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STRUCTURE FILE UPDATES: 27 AUG 2006 HIGHEST RN 904741-41-9  
DICTIONARY FILE UPDATES: 27 AUG 2006 HIGHEST RN 904741-41-9

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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=> d sta que 139  
L22 STR

C≡C—C≡C  
1 2 3 4

NODE ATTRIBUTES:

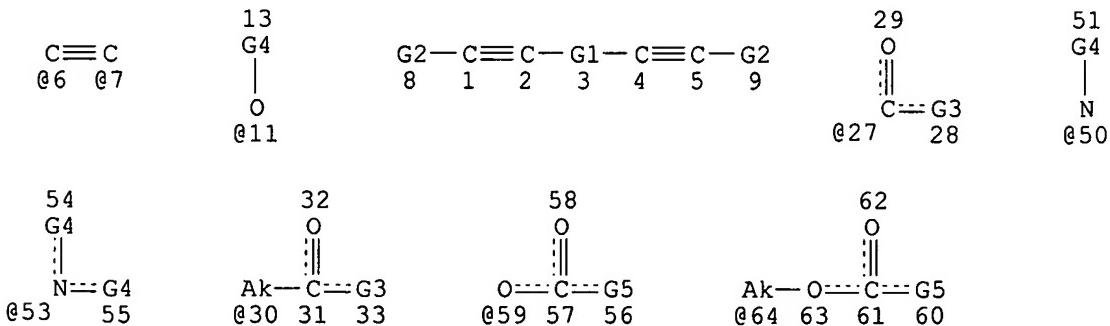
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE

L24 22444 SEA FILE=REGISTRY SSS FUL L22  
L25 STR



REP G1=(0-2) 6-2 7-4  
VAR G2=H/AK/CY/OH/11/27/30/59/64  
VAR G3=OH/11/NH2/50/53

VAR G4=AK/CY  
 VAR G5=NH2/50/53  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE  
 L29 2678 SEA FILE=REGISTRY SUB=L24 CSS FUL L25  
 L30 2620 SEA FILE=REGISTRY ABB=ON PLU=ON L29/COM  
 L35 SCR 2127 AND 1918  
 L37 SCR 2050 OR 2049  
 L39 152 SEA FILE=REGISTRY SUB=L30 SSS FUL L35 NOT L37

FULL SUBSET SCREEN SEARCH COMPLETED 152 ANSWERS  
 SEARCH TIME: 00.00.01

=> d his

(FILE 'HOME' ENTERED AT 08:13:01 ON 28 AUG 2006)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 08:13:19 ON 28 AUG 2006  
 L1 3 S US20040197684/PN OR (US2004-812125# OR US2003-459559#) /AP, PRN  
     E ANYUMBA/AU  
 L2 4 S E4  
     E LEWIS/AU  
 L3 2 S E3  
     E LEWIS D/AU  
 L4 370 S E3,E14  
     E LEWIS DAVE/AU  
 L5 406 S E3,E4,E23-E28  
     E SHIH/AU  
 L6 2 S E3  
     E SHIH H/AU  
 L7 45 S E3,E19  
     E SHIH HSIAO/AU  
 L8 20 S E6,E7  
     E SHIH NAME/AU  
 L9 1 S E4  
     E HSIAO/AU  
     E HSIAO Y/AU  
 L10 38 S E3,E30  
     E HSIAOYI/AU  
     E HSIAO NAME/AU  
 L11 3 S E4  
     E YU/AU  
 L12 2 S E3  
     E YU X/AU  
 L13 472 S E3-E26,E33  
 L14 469 S YU XIANG?/AU  
     E YU NAME/AU  
 L15 6 S E4  
     E XIANG/AU  
 L16 1 S E3

L17 E XIANG Y/AU  
 69 S E3-E10  
 L18 271 S XIANG YU?/AU  
 E XIANG NAME/AU  
 E ISP/PA,CS  
 L19 8896 S ISP?/PA,CS  
 L20 3 S L1 AND L2-L19  
 SEL RN

FILE 'REGISTRY' ENTERED AT 08:17:38 ON 28 AUG 2006

L21 20 S E1-E20  
 L22 STR  
 L23 50 S L22  
 L24 22444 S L22 FUL  
 SAV TEMP L24 LEE812/A  
 L25 STR L22  
 L26 50 S L25 CSS SAM SUB=L24  
 L27 STR L22  
 L28 50 S L27 CSS SAM SUB=L24  
 L29 2678 S L25 CSS FUL SUB=L24  
 SAV TEMP L29 LEE812A/A  
 L30 2620 S L29/COM  
 L31 10 S L21 AND L30  
 L32 4 S L31 AND LI/ELS  
 L33 13 S L30 AND LI/ELS  
 L34 12 S L33 NOT CCS/CI  
 L35 SCR 2127 AND 1918  
 L36 9 S L35 SAM SUB=L30  
 L37 SCR 2050 OR 2049  
 L38 6 S L35 NOT L37 SAM SUB=L30  
 L39 152 S L35 NOT L37 FUL SUB=L30  
 SAV L39 TEMP L33812B/A  
 L40 141 S L39 NOT L32,L34  
 L41 136 S L40 AND 2/NC  
 L42 126 S L41 NOT (OC4 OR NC5 OR C6)/ES  
 L43 5 S L40 NOT L41  
 SEL RN L43 4 5  
 L44 2 S E21,E22  
 L45 10 S L41 NOT L42  
 SEL RN L45 4 5 6  
 L46 3 S E23-E25  
 L47 5 S L42 AND (C18H18O4 OR C24H22O4 OR C4H2 OR C13H10O2)  
 L48 121 S L42 NOT L47  
 L49 138 S L32,L34,L44,L46,L48  
 L50 15 S L39 NOT L49  
 L51 156 S (886-66-8 OR 4572-12-7 OR 29768-12-5 OR 66990-32-7 OR 20264-5  
 L52 137 S L49 NOT BF4  
 SAV L52 TEMP L33812C/A  
 L53 105 S L30 AND (C4H2 OR C6H2 OR C8H2)  
 L54 69 S L53 AND NC>=2

FILE 'HCAOLD' ENTERED AT 09:00:10 ON 28 AUG 2006

L55 2 S L52  
 SEL AN  
 EDIT E26-E27 /AN /OREF

FILE 'HCAPLUS' ENTERED AT 09:00:33 ON 28 AUG 2006

L56 2 S E26-E27  
 L57 127 S L52  
 L58 1 S L56 AND L57

L59            2 S L56,L58  
 L60            126 S L57 NOT L59  
 L61            4 S L60 AND L1-L20  
 L62            118 S L60 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)  
 L63            114 S L62 NOT L59,L61  
                 E RADIATION DETECT/CT  
 L64            20432 S E4-E65  
                 E E4+ALL  
 L65            110004 S E4+OLD, NT  
 L66            730732 S E54+OLD, NT  
                 E E51+ALL  
 L67            34503 S E2+NT OR E7+OLD, NT  
                 E PHOTOCROM/CT  
 L68            9165 S E12+OLD, NT OR E23+OLD, NT OR E30+OLD, NT OR E31+OLD, NT  
                 E OPTICAL IMAGING/CT  
 L69            133709 S E4+OLD, NT  
 L70            3396 S E61+OLD, NT  
                 E E3+ALL  
 L71            222818 S E2+OLD, NT  
                 E FILAMENT/CT  
 L72            2516 S E35+OLD, NT  
 L73            10 S L57 AND L64-L72  
 L74            13 S L59,L61,L73  
 L75            19 S L57 AND RAD?/SC, SX  
 L76            6 S L75 AND L74  
 L77            13 S L75 AND (PY<=2003 OR PRY<=2003 OR AY<=2003) NOT L76  
 L78            26 S L74,L76,L77 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)  
 L79            18 S L63 AND P/DT  
 L80            16 S L79 NOT (CARBOHYDRAT? OR DETERGENT?)/SC, SX  
 L81            31 S L78,L80  
 L82            29 S L81 NOT L59

FILE 'USPATFULL' ENTERED AT 09:12:10 ON 28 AUG 2006

L83            13 S L52  
 L84            11 S L83 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)

FILE 'REGISTRY' ENTERED AT 09:12:28 ON 28 AUG 2006

=> fil hcaold  
 FILE 'HCAOLD' ENTERED AT 09:12:41 ON 28 AUG 2006  
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PRE-1967 CHEMICAL ABSTRACTS FILE WITH HOUR-BASED PRICING  
 FILE COVERS 1907-1966  
 FILE LAST UPDATED: 01 May 1997 (19970501/UP)

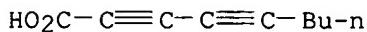
This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

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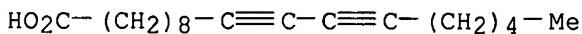
=> d all hitstr tot 155

L55 ANSWER 1 OF 2 HCAOLD COPYRIGHT 2006 ACS on STN  
 AN CA54:9747i CAOLD  
 TI synthesis of derivs. of alkadiynecarboxylic acids based on diacetylene  
 AU Popova, E. G.; Shevyakova, L. A.; Kraft, M. Ya.  
 IT 98550-64-2 103859-08-1 128755-63-5  
 IT 128755-63-5  
 RN 128755-63-5 HCAOLD  
 CN 2,4-Nonadiynoic acid, Cu salt (6CI) (CA INDEX NAME)



● 1/2 Cu(II)

L55 ANSWER 2 OF 2 HCAOLD COPYRIGHT 2006 ACS on STN  
 AN CA51:11992f CAOLD  
 TI synthesis of cis,cis-9,11- and cis,cis-10,-12-octadecadienoic acids  
 AU Sparreboom, S.  
 IT 771-39-1 1642-49-5 1839-11-8 2777-65-3 6308-96-9 7333-25-7  
 22880-03-1 28393-02-4 33128-27-7 91997-37-4 100399-51-7 102559-79-5  
 102707-66-4 103644-30-0 111498-34-1  
 IT 111498-34-1  
 RN 111498-34-1 HCAOLD  
 CN 10,12-Octadecadiynoic acid, magnesium salt (6CI) (CA INDEX NAME)



● 1/2 Mg

=> fil hcaplus  
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FILE COVERS 1907 - 28 Aug 2006 VOL 145 ISS 10  
 FILE LAST UPDATED: 27 Aug 2006 (20060827/ED)

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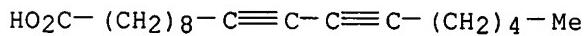
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr tot 159

L59 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1960:49938 HCAPLUS  
 DN 54:49938  
 OREF 54:9747h-i,9748a-b  
 ED Entered STN: 22 Apr 2001  
 TI Synthesis of some derivatives of alkadiynecarboxylic acids based on diacetylene  
 AU Popova, E. G.; Shevyakova, L. A.; Kraft, M. Ya.  
 CS S. Ordzhonikidze All-Union Chem. Pharm. Research Inst., Moscow  
 SO Zhurnal Obshchey Khimii (1959), 29, 1953-6  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DT Journal  
 LA Unavailable  
 CC 10B (Organic Chemistry: Aliphatic Compounds)  
 AB To NaNH<sub>2</sub> prepared from 12.93 g. Na in the presence of 0.25 g. Fe(NO<sub>3</sub>)<sub>3</sub>, and suspended in liquid NH<sub>3</sub> was gradually added 23.21 g. 1,4-dichloro-2-butyne, followed after 1 hr. by 30 g. Cl(CH<sub>2</sub>)<sub>2</sub>Br; on the following day the mixture yielded 12.7% 1-chloro-4,6-heptadiyne (I), b<sub>4</sub> 52-3°. Similar reaction with butyldiacetylene gave 28.7% 1-chloro-4,6-undecadiyne, b<sub>0.1</sub> 76°. To EtMgBr from 1.25 g. Mg was added 5.5 g. butyldiacetylene, the whole was refluxed 1 hr., cooled to -50°, and treated with Dry Ice to yield after acidification with 5N HCl, neutralization with NaHCO<sub>3</sub>, and treatment with CuSO<sub>4</sub>, a green-blue crystalline Cu 5,7-octadiyne-8-carboxylate. This treated with HCl, extracted with petr. ether and the extract treated with MeOH in the presence of H<sub>2</sub>SO<sub>4</sub> 5 days at 5°, gave a crude Me ester, which was directly treated with concentrated NH<sub>4</sub>OH 50 hrs. to yield 5,7-octadiyne-8-carboxamide, m. 118°, λ 275, 260, 246, and 233 μ. Iso-PhNH<sub>2</sub> similarly gave the N-isopropylamide, m. 69°, λ 276, 260, 248, and 236 μ. I treated with EtMgBr and Dry Ice, as above, similarly gave 1-chloro-4,6-heptadiyne-7-carbox-N-propylamide, m. 83°.  
 IT Acids  
     (diacetylenic carboxylic)  
 IT Ultraviolet and visible, spectra  
     (of 2,4-nonadiynamide)  
 IT 2,4-Nonadiynoic acid, copper salt  
 IT 460-12-8, Butadiyne  
     (diacetylenic carboxylic acid preparation from)  
 IT 4047-86-3, Imidodisulfamide, N-methyl- 19433-84-2, Propionamide,  
 2,3-dichloro- 98550-64-2, 1,3-Heptadiyne, 7-chloro- 98995-81-4,  
 2,4-Nonadiynamide 100129-43-9, 2,4-Octadiynamide, 8-chloro-N-isopropyl-  
 100368-99-8, 2,4-Nonadiynamide, N-isopropyl- 103859-08-1,  
 4,6-Undecadiyne, 1-chloro-  
     (preparation of)  
 L59 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1957:66394 HCAPLUS  
 DN 51:66394  
 OREF 51:11992f-i,11993a-b  
 ED Entered STN: 22 Apr 2001  
 TI Synthesis of cis,cis-9,11- and cis,cis-10,12-octadecadienoic acids  
 AU Sparreboom, S.

CS Unilever Research Lab., Vlaardingen, Neth.  
 SO Koninkl. Ned. Akad. Wetenschap., Proc. Ser. B (1956), 59, 472-9  
 DT Journal  
 LA Unavailable  
 CC 10 (Organic Chemistry)  
 AB Dibromoundecanoic acid, prepared from 10-undecenoic acid (slip point 19.6°), was dehydrobromated to give 11-bromo-10-undecenoic acid. Thermal decomposition of the K salt of the latter and crystallization of the distillate from ligroine at -15° yielded 10-undecynoic acid (I), m. 42.5-3.0°, nD65 1.4393. A solution of 1 g. heptyne, b. 97.5-8.5°, nD20 1.4086, and 6.5 g. I in 10 ml. EtOH was added slowly at 20° with stirring to a solution of 50 g. CuCl and 80 g. NH4Cl in 200 ml. H2O containing 3.5 g. heptyne, the mixture stirred 5 hrs. at 50°, the Cu complexes decomposed with HCl, the product taken up in Et2O, washed with H2O, and extracted with aqueous Na2CO3 to yield 2.8 g. neutral fraction and 7.5 g. acid mixture. The latter was treated with ligroine, which left 1.85 g. undissolved 10,12-docosadiynedioic acid, m. 112.1-13.0° (from ligroine), λ 239, 253, 265 mμ, (ε 412, 228, 40). The soluble acid fraction was dissolved in 400 ml. H2O containing excess NH3. Addition of 60 ml. 10% aqueous NH4Cl and excess 15% aqueous MgSO4 precipitated the Mg salt of 10,12-octadecadiynoic acid, from which the acid (II) was liberated. II, m. 42.2-2.4° (from ligroine at -20°), nD65 1.4810, λ 226, 239, 252.5 mμ (ε 450, 430, 250), turned red on heating to 41°, and on exposure to light gave a blue product, insol. in ligroine. A mixture of 2 g. II, 1 g. catalyst (cf. Lindlar, C.A. 47, 1573f), 0.025 g. quinoline, and 10 ml. EtOH was stirred and hydrogenated 4 hrs., the product dissolved in 30 parts ligroine, and the solution cooled to -40° to precipitate cis,cis-10,12-octadecadienoic acid (III), which was crystallized repeatedly at -40° from 100 parts ligroine and from 25 parts acetone. III, m. 38.2-9.0°, nD70 1.4637, d70 0.8810, λ 235 mμ, [ε 25,900 (EtOH), 26,600 (ligroine)], did not contain any trans double bonds, as shown by the infrared spectrum. Et undecynoate was treated with PhMgBr to give 1,1-diphenyl-10-undecyn-1-ol, nD20 1.5556, which was heated 10 min. to 220° with granulated clay pipe catalyst to yield 1,1-diphenylundec-1-en-10-yne (IV), m. 38.3-8.8° (from ligroine at -30°), b0.1 175°, nD65 1.5427, λ 251 mμ, ε 15,000. Oxidation of IV with CrO3 in AcOH and distillation gave 9-decynoic acid (V), m. 25.5-6.1° (from ligroine at -5°), b0.1 88°, nD27 1.4523. A solution of 0.5 g. octyne, b. 125-7°, nD20 1.4165, and 6.2 g. V in 10 ml. EtOH was added slowly at 20° to a solution of 50 g. CuCl and 80 g. NH4Cl in 200 ml. H2O containing 4.0 g. octyne and 6 ml. 2N NH3 and the mixture stirred 5 hrs. at 50° with air passing over the surface during the last hr. This gave: 3.25 g. neutral fraction; 4.6 g. 9,11-eicosadiynedioic acid, insol. in cold ligroine, m. 117-18° (from acetone at -50°), λ 239, 253.5 mμ (ε 400, 226), blue discoloration by light; 0.4 g. V; 1.7 g. 9,11-octadecadiynoic acid (VI), m. 47.5-8.0° (from ligroine at -50°), nD65 1.4813, λ 226, 239, 253.5 mμ (ε 410, 383, 222). Partial hydrogenation of VI gave cis,cis-9,11-octadecadienoic acid, m. 42.0-3.2°, nD70 1.4631, d70 0.8802, λ 235 mμ [ε 26,000 (EtOH), 26,700 (ligroine)].  
 IT Ultraviolet and visible, spectra (of acids (unsatd.))  
 IT Infrared spectra

(of carboxylic acids (unsatd.))  
IT 544-70-7, 9,11-Octadecadienoic acid, cis,cis- 1642-49-5, 9-Decynoic acid  
2777-65-3, 10-Undecynoic acid 6308-96-9, Undecanoic acid, 10,11-dibromo-  
7307-45-1, 10,12-Octadecadienoic acid, cis,cis- 7333-25-7,  
10,12-Octadecadiynoic acid 28393-02-4, 10,12-Docosadiynedioic acid  
33128-27-7, 9,11-Octadecadiynoic acid 100399-51-7, 10-Undecenoic acid,  
11-bromo- 102559-79-5, 1-Undecen-10-yne, 1,1-diphenyl- 102707-66-4,  
9,11-Heneicosadiynedioic acid 103644-30-0, 10-Undecyn-1-ol,  
1,1-diphenyl- 111498-34-1, 10,12-Octadecadiynoic acid, magnesium  
salt  
(preparation of)  
IT 111498-34-1, 10,12-Octadecadiynoic acid, magnesium salt  
(preparation of)  
RN 111498-34-1 HCAPLUS  
CN 10,12-Octadecadiynoic acid, magnesium salt (6CI) (CA INDEX NAME)



● 1/2 Mg

=> d bib abs hitstr retable tot 182

L82 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2006:606485 HCAPLUS  
DN 145:93049  
TI Lithium salt of polyacetylene as radiation sensitive filaments and  
preparation and use thereof  
IN Anyumba, Janette; Lewis, David F.; Shih,  
Hsiao-Yi, Xiang

*Same  
2010 entry*

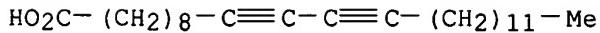
PA Isp Investments Inc., USA  
SO U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of U.S. Ser. No. 789,007.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
PI US 2006134551	A1	20060622	US 2006-338017	20060124 <--
US 2004197700	A1	20041007	US 2004-789007	20040227 <--
PRAI US 2003-459559P	P	20030401 <--		
US 2004-789007	A2	20040227		

AB This invention relates to photochromic filaments composed of the lithium  
salt of a conjugated, polymerizable polyacetylene having a carboxylic acid  
or carboxylate terminal group wherein the length to width ratio of said  
filaments is between about 5000:1 and about 5:1 and the average length of the  
filament is up to about 5 cm. The invention also pertains to the use of  
said salts in maximized radiation sensitivity for imaging, radiation dose  
measurement or mapping and detection of radiation fields.

IT 66990-36-1P, Lithium Pentacosa-10,12-diynoate  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(lithium salt of polyacetylene as radiation sensitive filaments)

RN 66990-36-1 HCAPLUS  
CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

L82 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:824992 HCAPLUS  
 DN 141:339093  
 TI Lithium salt of polyacetylene as radiation sensitive filaments and preparation and use thereof  
 IN Anyumba, Janette; Lewis, David F.; Shih, Hsiao-Yi; Yu, Xiang  
 PA Isp Investments Inc., USA  
 SO U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of U.S. Provisional Ser. No. 459,559.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO	DATE
PI	US 2004197700	A1	20041007	US 2004-789007	<u>20040227</u> <--
	AU 2004232140	A1	20041104	AU 2004-232140	20040310 <--
	CA 2520790	AA	20041104	CA 2004-2520790	20040310 <--
	WO 2004095065	A2	20041104	WO 2004-US7273	20040310 <--
	WO 2004095065	A3	20050728		
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	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1614002	A2	20060111	EP 2004-719225	20040310 <--
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK			
	WO 2004094967	A2	20041104	WO 2004-US8895	20040324 <--
	WO 2004094967	A3	20050602		
		W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
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	US 2006134551	A1	20060622	US 2006-338017	<u>20060124</u> <--
PRAI	US 2003-459559P	P	<u>20030401</u>		<--

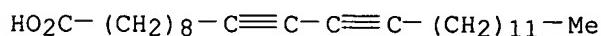
US 2004-789007 A 20040227  
 WO 2004-US7273 W 20040310

AB This invention relates to photochromic filaments composed of the Li salt of a conjugated, polymerizable polyacetylene having a carboxylic acid or carboxylate terminal group wherein the length to width ratio of the filaments is between .apprx.5000:1 and .apprx.5:1 and the average length of the filament is up to .apprx.5 cm. The invention also pertains to the use of the salts in maximized radiation sensitivity for imaging, radiation dose measurement or mapping and detection of radiation fields.

IT 66990-36-1P, Pentacosa-10,12-diynoic acid, lithium salt  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (lithium salt of polyacetylene as radiation sensitive filaments and preparation and use thereof)

RN 66990-36-1 HCAPLUS

CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)

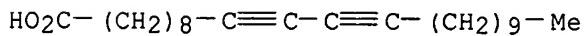


● Li

IT 67360-63-8, Tricosa-10,12-diynoic acid, lithium salt  
 200412-03-9, Eicosa-5,7-diynoic acid, lithium salt  
 769952-16-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (lithium salt of polyacetylene as radiation sensitive filaments and preparation and use thereof)

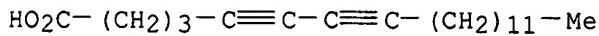
RN 67360-63-8 HCAPLUS

CN 10,12-Tricosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



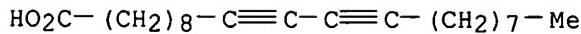
● Li

RN 200412-03-9 HCAPLUS  
 CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 769952-16-1 HCAPLUS  
 CN 10,12-Heneicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

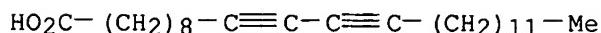
L82 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:824983 HCAPLUS  
 DN 141:340546  
 TI Composition and method for 3-dimensional mapping or radiation dose  
 IN Anyumba, Janette; Lewis, David F.; Shih,  
 Hsiao-yi; Yu, Xiang  
 PA Isp Investments Inc., USA  
 SO U.S. Pat. Appl. Publ., 6 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004197684	A1	20041007	US 2004-812125	<u>20040329</u> <--
	WO 2004094967	A2	<u>20041104</u>	WO 2004-US8895	20040324 <--
	WO 2004094967	A3	<u>20050602</u>		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI US 2003-459559P P 20030401 <--  
 AB In accordance with this invention, there is provided a method of imaging, measuring and displaying a 3-dimensional dose distribution of an energy field in a translucent 3-dimensional object. The method comprises steps of: applying an energy field to the object such that the optical properties are changed upon receipt of the energy; optically scanning the object at various positions and angles to provide a series of 2-dimensional representations of the object; detecting the measuring light projection data indicative of optical changes in the object; calibrating the optical change in the object to the dose of the energy corresponding to each position scan; mapping the dose of the energy in the object and visually recording the summation of said 2-dimensional representations on an image display receiver. The method uses radiation activated metal salt of a crystalline, thermochromic polyacetylene having a conjugated structure uniformly distributed in a rigid or high d. semi-solid matrix by a color alteration due to polymerization of the activated polyacetylene to provide a permanent, 3-dimensional image of the object in high spatial resolution. The invention further provides image display receivers and radiation sensitive materials.

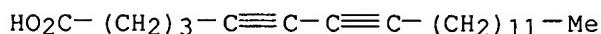
IT 66990-36-1P, Lithium pentacosa-10,12-diynoate 200412-03-9P  
 , Lithium eicosa-5,7-diynoate  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(composition and method for 3-dimensional mapping or radiation dose)  
RN 66990-36-1 HCPLUS  
CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



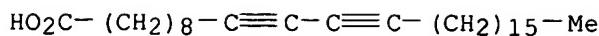
● Li

RN 200412-03-9 HCPLUS  
CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

L82 ANSWER 4 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
AN 1999:725579 HCPLUS  
DN 132:27728  
TI Photoelectrochemical behaviour of CdS "Q-state" semiconductor particles in 10,12-nonacosadiynoic acid polymer Langmuir-Blodgett films  
AU Mansur, H. S.; Vasconcelos, W. L.; Grieser, F.; Caruso, F.  
CS Metallurgical and Materials Eng. Dep., Universidade Federal de Minas Gerais, Brazil  
SO Journal of Materials Science (1999), 34(21), 5285-5291  
CODEN: JMTSAS; ISSN: 0022-2461  
PB Kluwer Academic Publishers  
DT Journal  
LA English  
AB CdS Q-state semiconductor particles from 2 to 10 nm diameter were nucleated and grown in 10,12-nonacosadiynoic acid (NCDA) polymer Langmuir-Blodgett (LB) films deposited on ITO plates. The polymerization process through exposure to UV-visible light gave the blue form followed by the final red form after 60 min. XPS measurements confirmed the deposition of the NCDA cadmium salt and the formation of the CdS particles after exposure to H<sub>2</sub>S(g) in the LB matrix. A study of the photoelectrochem. behavior of these systems was conducted through polarization current-voltage (I-V) curves in the range of 0 to -1000 mV (SCE). An average open-circuit voltage (Voc) from -600 to -700 mV values was observed for photoelectrochem. (PEC) cells constructed for the undoped NCDA polymer LB film with 10 nm diameter CdS particles. The I<sub>2</sub>-doped NCDA polymer film presented an increase in the conductivity compared with the undoped film but with a deterioration of stability of the PEC system.  
IT 87933-97-9, 10,12-Nonacosadiynoic acid, cadmium salt (2:1)  
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)  
(formation and UV-visible spectra and reaction with H<sub>2</sub>S:  
photoelectrochem. behavior of CdS Q-state semiconductor particles in nonacosadiynoic acid polymer Langmuir-Blodgett films)  
RN 87933-97-9 HCPLUS  
CN 10,12-Nonacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

## RETABLE

Referenced Author (RAU)	Year (R PY)	VOL (R VL)	PG (R PG)	Referenced Work (R WK)	Referenced File
Ahmed, F	1990	187	141	Thin Solid Films	HCAPLUS
Collins, M	1988	26	367	J Polym Sci Olym Phy	HCAPLUS
Deckert, A	1994	10	1948	Langmuir	HCAPLUS
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Grant, J	1989	14	271	SIA Surface Interfac	
Gratzel, M	1989			Heterogeneous Photoc	
Grieser, F	1994		28	3rd Australian/Japan	
Grieser, F	1992	88	2207	J Chem Soc Faraday T	HCAPLUS
Gutierrez, M	1983	87	474	Ber Bunsenges Phys C	HCAPLUS
Hayes, D	1987	91	231	Ber Bunsenges Phys C	
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Hodes, G	1988	88	298	Proc Electrochem Soc	
Lopez, E	1982	104	305	J Amer Chem Soc	HCAPLUS
Mansur, H	1996	15	312	Acta Microscopica	
Mansur, H	1997	16	256	Acta Microscopica	
Mansur, H	1995	91	3399	J Chem Soc Faraday T	HCAPLUS
Mansur, H	1995	91	665	J Chem Soc Faraday T	
Minoura, H	1978	23	1377	Electrochimica Acta	HCAPLUS
Murov, L	1993			Handbook of Photoche	
Ringsdorf, H	1978	16	205	J Polym Sci Lett Edn	
Scoberg, D	1991		515	J Chem Soc Chem Comm	HCAPLUS
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Tieke, B	1982	88	471	J Colloid Interface	HCAPLUS
Tieke, B	1981	15	1045	J Macromol Sci Chem	
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Urquhart, R	1994	10	899	Langmuir	HCAPLUS
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Vogel, R	1990	174	241	Chem Phys Lett	HCAPLUS
Wang, Y	1990	42	7253	Phys Rev B	HCAPLUS

L82 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:783815 HCAPLUS

DN 128:68556

TI Processless diacetylenic salt films capable of developing a black image

IN Lewis, David F.; Varma, Sangya S.

PA ISP Investments Inc., USA

SO PCT Int. Appl., 74 pp.

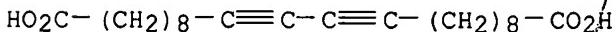
CODEN: PIXXD2

DT Patent

LA English

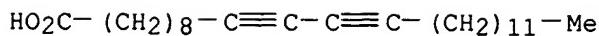
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9744708	A1	19971127	WO 1997-US4688	19970307 <--
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5731112	A	19980324	US 1996-652144	19960523 <--
	AU 9725415	A1	19971209	AU 1997-25415	19970307 <--
	EP 900409	A1	19990310	EP 1997-916931	19970307 <--
	EP 900409	B1	20040811		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000512627	T2	20000926	JP 1997-542334	19970307 <--
	AT 273530	E	20040815	AT 1997-916931	19970307 <--
	US 6177578	B1	20010123	US 1998-35607	19980305 <--
PRAI	US 1996-652144	A	19960523 <--		
	WO 1997-US4688	W	19970307 <--		
AB	This invention relates to a mixture of imageable polyacetylenic compds. which have similar photosensitivities and which are visually imageable in complementary colors combinable to provide a black image, which mixture contains at least one polyacetylenic metal salt which produces a color, preferably a metal salt of a diacetylene C <sub>6</sub> to C <sub>48</sub> mono- or dicarboxylic acid, which is complementary to a color produced by another polyacetylenic metal salt or non-metallic polyacetylenic compound contained in the mixture or in an another integral color forming layer. The invention also pertains to the use of said mixture and the manner of its preparation				
IT	52892-21-4P 66990-36-1P, Lithium pentacosa-10,12-diynoate 200412-00-6P, Zinc bis(Pentacosa-10,12-diynoate) 200412-01-7P 200412-02-8P, Zinc bis(eicosa-5,7-diynoate) 200412-03-9P, Lithium eicosa-5,7-diynoate 200412-04-0P, Zinc bis(octadeca-5,7-diynoate) 200412-05-1P				
	RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses (processless diacetylenic salt films capable of developing black image)				
RN	52892-21-4 HCPLUS				
CN	10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX NAME)				



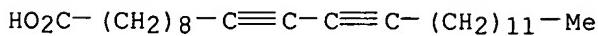
● Ba

RN 66990-36-1 HCPLUS  
 CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



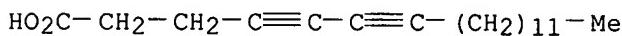
● Li

RN 200412-00-6 HCAPLUS  
 CN 10,12-Pentacosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



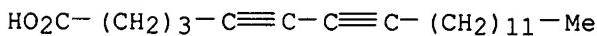
● 1/2 Zn

RN 200412-01-7 HCAPLUS  
 CN 4,6-Nonadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



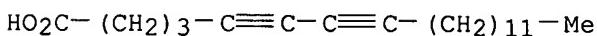
● 1/2 Zn

RN 200412-02-8 HCAPLUS  
 CN 5,7-Eicosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



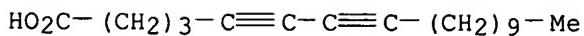
● 1/2 Zn

RN 200412-03-9 HCAPLUS  
 CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



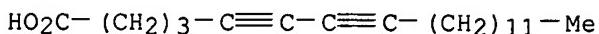
● Li

RN 200412-04-0 HCAPLUS  
 CN 5,7-Octadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-05-1 HCAPLUS  
 CN 5,7-Eicosadiynoic acid, barium salt (9CI) (CA INDEX NAME)



● 1/2 Ba

L82 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1995:896253 HCAPLUS

DN 123:288342

TI Polymer blends

IN Eisenbach, Claus; Fischer, Karl; Hoffmann, Joerg

PA Bayer A.-G., Germany

SO Ger. Offen., 7 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4401217	A1	19950720	DE 1994-4401217	19940118 <--
	US 5504157	A	19960402	US 1995-370935	19950110 <--
	CA 2140155	AA	19950719	CA 1995-2140155	19950113 <--
	JP 07216148	A2	19950815	JP 1995-20921	19950117 <--

PRAI DE 1994-4401217 A 19940118 --

AB Homogeneous polymer blends are formulated from (A) 1-30 weight% rigid rod-forming polymers with persistence length  $\geq$  10 nm and ratio of mol. length to diameter  $\geq$  30 and (B) 70-99 weight% flexible polymer which is nonionic polar and/or ionic and/or contains groups which can form ions comprising polyolefins, polyacrylates, polyamides and polyurethanes. Polymer A contains at least the min. required chemical fixed nonionic polar group and/or ionic group and/or groups which can form ions to assure compatibility of the A-B blend. Thus, a blend was prepared from styrene-4-vinylbenzoic acid copolymer and poly(5,7-dodecadiyne-1,12-dicarboxylic acid) triethylamine salts. The blend exhibited glass transition 89°.

IT 169762-41-8

RL: POF (Polymer in formulation); USES (Uses)  
 (blends with styrene-vinylbenzoate copolymers; compatible homogeneous blends from rigid rod polymers and flexible polymers)

RN 169762-41-8 HCAPLUS

CN 5,7-Dodecadiynedioic acid, homopolymer, potassium salt (9CI) (CA INDEX NAME)

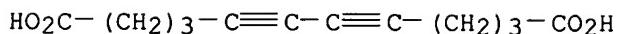
CM 1

CRN 81772-20-5

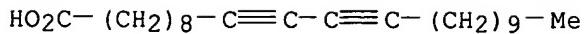
CMF (C12 H14 O4)x  
 CCI PMS

CM 2

CRN 28393-04-6  
 CMF C12 H14 O4



L82 ANSWER 7 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1994:436787 HCPLUS  
 DN 121:36787  
 TI Kinetics of the Reversible Thermochromism in Langmuir-Blodgett Films of Cd<sup>2+</sup> Salts of Polydiacetylenes Studied Using UN-Vis Spectroscopy  
 AU Deckert, Alice A.; Fallon, Lara; Kiernan, Lisa; Cashin, Christopher; Perrone, Anthony; Encalarde, Terry  
 CS Department of Chemistry, College of the Holy Cross, Worcester, MA, 01610, USA  
 SO Langmuir (1994), 10(6), 1948-54  
 CODEN: LANGD5; ISSN: 0743-7463  
 DT Journal  
 LA English  
 AB The first quant. model for the partially reversible thermochromism in Langmuir-Blodgett films of the polymerized Cd<sup>2+</sup> salts of 10,12-tricosadiynoic acid (TCDA) and 10,12-pentacosadiynoic acid (PCDA) is presented. The visible spectrum as a function of temperature provides evidence for two parallel processes, one of which is reversible. The following kinetic model is proposed which qual. and quant. accounts for the observed reversible thermochromism: B .dblarrw. R (kf, kr); P → R (k2). B and P stand for two distinct forms of the blue polymer, and R stands for the red form of the polymer. Activation barriers of Ef = 22.5 kcal/mol, Er = 21.4 kcal/mol, and E2 = 23.0 kcal/mol are obtained from the TCDA spectra as a function of temperature using a "normal" preexponential factor of 1012 s<sup>-1</sup> and Ef and Er as adjustable parameters. The same model can be fit to films of PCDA and gives activation barriers of Ef = 21.5 kcal/mol, Er = 21.0 kcal/mol, and E2 = 22.5 kcal/mol.  
 IT 60705-85-3, 10,12-Tricosadiynoic acid cadmium salt homopolymer  
 66990-51-0, 10,12-Pentacosadiynoic acid cadmium salt homopolymer  
 RL: PRP (Properties)  
 (Langmuir-Blodgett films, kinetics of reversible thermochromism in)  
 RN 60705-85-3 HCPLUS  
 CN 10,12-Tricosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 60705-84-2  
 CMF C23 H38 O2 . 1/2 Cd

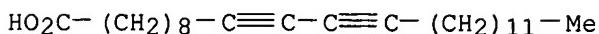


●1/2 Cd

RN 66990-51-0 HCAPLUS  
 CN 10,12-Pentacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX  
 NAME)

CM 1

CRN 66990-50-9  
 CMF C25 H42 O2 . 1/2 Cd



●1/2 Cd

L82 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1991:634938 HCAPLUS  
 DN 115:234938  
 TI Raman-active polydiacetylenes for inks for printing security documents whose authenticity can be easily verified.

IN Bratchley, Robin; Nugent, Nicholas Oliver; Ellis, Linda Susan  
 PA De la Rue Co. PLC, UK  
 SO PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2

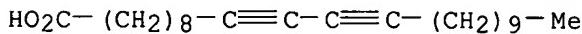
DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9111492	A1	19910808	WO 1990-GB2033	19901228 <--
	W: CA, GB, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	CA 2075055	AA	19910803	CA 1990-2075055	19901228 <--
	EP 513024	A1	19921119	EP 1991-901878	19901228 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE				
	GB 2256433	A1	19921209	GB 1992-14030	19901228 <--
	GB 2256433	B2	19940413		
	US 5324567	A	19940628	US 1992-910343	19920724 <--
PRAI	GB 1990-2360	A	19900202	<--	
	WO 1990-GB2033	W	19901228	<--	
AB	The title compds. have particle diameter $\leq 40 \mu\text{m}$ and, when exposed to 1.5-3.2 mW laser light, show Raman scattering at a level of $\geq 10^{-3}$ pW above the intensity of the background signal. Thus, an ink containing 10% dodeca-5,7-diyne-1,12-bis(ethylurethane) which was polymerized at 100° for 24 h to form $\leq 10-\mu\text{m}$ particles showed thermochromic (light purple to pink) properties.				
IT	67360-64-9				
	RL: USES (Uses)				

RN (Raman-active, for thermochromic inks, for printing security documents)  
RN 67360-64-9 HCAPLUS  
CN 10,12-Tricosadiynoic acid, lithium salt, homopolymer (9CI) (CA INDEX  
NAME)

CM 1

CRN 67360-63-8  
CMF C23 H38 O2 . Li



● Li

L82 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1991:235758 HCAPLUS  
DN 114:235758  
TI Method using x-rays to determine thickness of organic films  
IN Okada, Shuji; Matsuda, Hiro; Nakanishi, Hachiro; Kato, Masao  
PA Agency of Industrial Sciences and Technology, Japan; Japan, Ministry of  
International Trade and Industry

SO U.S., 7 pp.  
CODEN: USXXAM

DT Patent  
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5003569	A	19910326	US 1990-493322	19900314 <--
PRAI JP 1989-66929	A	19890317 <--		

AB The thickness of organic films is determined in a method comprising  
irradiating an  
organic film to be measured with x-rays while continuously varying the angle  
of incidence of the x-rays with respect to the organic film; continuously  
receiving x-rays reflected by the organic film; detecting angles  $\theta$  of  
reflection at which intensities of the reflected x-rays reach resp. peaks;  
and determining the thickness of the organic film by taking an average of  
values of

thickness  $d$  of the organic film found at each of the peaks from the angles  
 $\theta$  of reflection using the formula  $d = n\lambda/\sin \theta$ , where  
 $\lambda$  designates the wavelength of the x-rays and  $n$  is an integer. In  
this way, film thickness is measured with a precision on the Å order  
even during film fabrication, without making contact with the film sample.  
Application to electronic, optical, or magnetic materials is indicated.  
The thin-film fabrication methods may include vacuum deposition, mol.-beam  
epitaxy sputtering, chemical vapor deposition, or Langmuir-Blodgett.

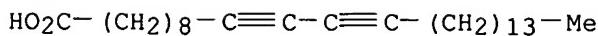
IT 67132-60-9, Cadmium heptacosa-10,12-diynoate

RL: PRP (Properties)

(determination of thickness of films of, x-ray method for)

RN 67132-60-9 HCAPLUS

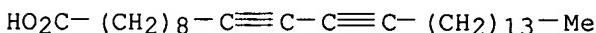
CN 10,12-Heptacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

L82 ANSWER 10 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1991:187107 HCPLUS  
 DN 114:187107  
 TI Langmuir Blodgett laminated films, their manufacture and their uses in electronic optical devices  
 IN Okada, Shuji; Matsuda, Yasuo; Nakanishi, Hachiro; Kato, Masao; Abe, Koji; Ito, Hiroshi  
 PA Agency of Industrial Sciences and Technology, Japan; Mitsui Toatsu Chemicals, Inc.  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02281047	A2	19901116	JP 1989-100236	19890421 <--
	JP 07119083	B4	19951220		
PRAI	JP 1989-100236		19890421 <--		
AB	The title films are prepared by alternatively laminating $\geq 1$ organic low-mol. weight (polymerizable) monomol. or polymeric thin films with $\geq 1$ polymeric amorphous monomol. films using Langmuir Blodgett method. Thus, poly(iso-Bu methacrylate) amorphous monomol. films and heptacosa-10,12-diynoic acid monomol. films were alternatively laminated using Langmuir Blodgett method to give a laminated film consisting of 41 layers and showing good optical properties.				
IT	67132-60-9P, Cadmium heptacosa-10,12-diynoate RL: PREP (Preparation) (Langmuir Blodgett laminated films, with polymeric amorphous monomol. films, manufacture of, for optical devices)				
RN	67132-60-9 HCPLUS				
CN	10,12-Heptacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)				



●1/2 Cd

L82 ANSWER 11 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1991:14628 HCPLUS  
 DN 114:14628  
 TI Gold/Langmuir-Blodgett film/zinc selenide tunnel injection light-emitting structures  
 AU Rambidi, N. G.; Georgobiani, A. N.; Todua, P. A.  
 CS All-Union Res. Cent. Surf. Vac. Invest., Moscow, USSR  
 SO Mol. Electron.: Biosens. Biocomput., [Proc. Off. Nav. Res. Natl. Sci. Found. Symp.] (1989), Meeting Date 1988, 339-51. Editor(s):

Hong, Felix T. Publisher: Plenum, New York, N. Y.

CODEN: 56WEAP

DT Conference

LA English

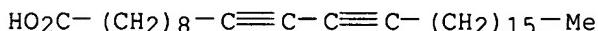
AB The Au/Langmuir-Blodgett film/ZnSe structure, in which the insulating layers consist of stearate and Cd(CH<sub>3</sub>(CH<sub>2</sub>)<sub>15</sub> - C .tplbond. C - C .tplbond. C - (CH<sub>2</sub>)<sub>8</sub>CO<sub>2</sub>)<sub>2</sub> are MIS structures characterized by tunnel-injection current and electroluminescence excitation mechanisms. The high reproducibility of the electrophys. and emission properties of these structures underlines the desirability of use of the LB technique in generating short wavelength visible light-sources using wide-band AIIIBVI semiconductor compds.

IT 87933-97-9

RL: DEV (Device component use); USES (Uses)  
(electroluminescent device containing, with tunnel injection)

RN 87933-97-9 HCPLUS

CN 10,12-Nonacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

L82 ANSWER 12 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1990:620954 HCPLUS

DN 113:220954

TI Optical frequency converter and its fabrication

IN Nishio, Yoshitaka; Hamada, Yuji; Fujii, Takanori; Sakata, Masakazu;  
Tsujino, Yoshikazu; Kuroki, Kazuhiko

PA Sanyo Electric Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02156230	A2	19900615	JP 1988-311369	19881208 <--
	US 4997244	A	19910305	US 1989-438162	19891116 <--

PRAI JP 1988-311369 A 19881208 <--

AB An optical frequency converter is fabricated by stepwise deposition of ≥1 thin films of mol. oriented organic nonlinear optical materials to form an optical waveguide.

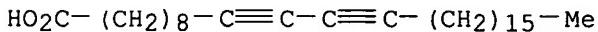
IT 87933-97-9

RL: PRP (Properties)

(films, in optical frequency converter multilayer waveguide structures)

RN 87933-97-9 HCPLUS

CN 10,12-Nonacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

L82 ANSWER 13 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1990:498277 HCPLUS  
 DN 113:98277

TI Manufacture of multidimensional polydiacetylenedicarboxylate crystals  
 IN Matsuda, Hiroo; Nakanishi, Hachiro; Kato, Masao  
 PA Agency of Industrial Sciences and Technology, Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02091106	A2	19900330	JP 1988-243150	19880928 <--
	JP 05083087	B4	19931124		

PRAI JP 1988-243150 19880928 <--

AB High-strength title polymers are manufactured by stirring solns. or suspensions of HO<sub>2</sub>C(CH<sub>2</sub>)<sub>n</sub>C.tplbond.CC.tplbond.C(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>H (I, n = 0-20) and polyvalent metal carbonates and/or polyvalent metal acetates and subsequent solid-phase polymerization of the resulting ion-crosslinked crystals by UV irradiation,  $\gamma$ -ray irradiation, heating, or pressurizing. Thus, a solution of I (n = 8) in MeOH was stirred with Cu(OAc)<sub>2</sub> to give Cu-crosslinked crystals, which was heated at 150° and 50,000 atm for 20 min to give a product with Vickers hardness 185.

IT 128866-59-1P 128866-61-5P 128866-63-7P

128866-65-9P 129062-54-OP

RL: PREP (Preparation)

(preparation of, crystalline, multidimensional, with high strength)

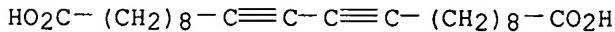
RN 128866-59-1 HCPLUS

CN 10,12-Docosadiynedioic acid, copper salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 128866-58-0

CMF C22 H34 O4 . x Cu



●x Cu(x)

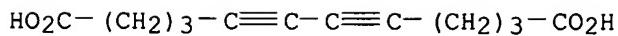
RN 128866-61-5 HCPLUS

CN 5,7-Dodecadadiynedioic acid, copper salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 128866-60-4

CMF C12 H14 O4 . x Cu

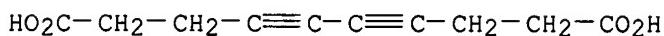


●x Cu(x)

RN 128866-63-7 HCAPLUS  
 CN 4,6-Decadiynedioic acid, zinc salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 128866-62-6  
 CMF C10 H10 O4 . x Zn

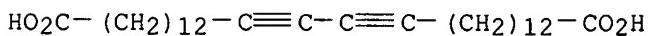


●x Zn

RN 128866-65-9 HCAPLUS  
 CN 14,16-Triacontadiynedioic acid, manganese salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 128866-64-8  
 CMF C30 H50 O4 . x Mn

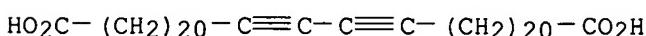


●x Mn(x)

RN 129062-54-0 HCAPLUS  
 CN 22,24-Hexatetracontadiynedioic acid, iron salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 129062-53-9  
 CMF C46 H82 O4 . x Fe



●x Fe(x)

AN 1990:8484 HCAPLUS  
 DN 112:8484  
 TI Catalysts for electroless plating  
 IN Kawada, Ken; Sato, Kozo; Tsuboi, Masaaki  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01104782	A2	19890421	JP 1988-154301	19880622 <--
	JP 01131250	A2	19890524	JP 1988-155679	19880623 <--
	JP 07053777	B4	19950607		
	US 4927897	A	19900522	US 1988-214062	19880701 <--
	US 5055537	A	19911008	US 1990-491907	19900312 <--
PRAI	JP 1987-166116	A1	19870702 <--		
	US 1988-214062	A3	19880701 <--		

AB The title catalysts contain polymers of alkynes and Group VIII or 1B metal. A PET film was spin-coated with a solution of AgC.tplbond.CCH<sub>2</sub>(OCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>OEt 0.24, H<sub>2</sub>O 0.36, and MeOH 1.80 g (1 mL/4.5 + 7 cm) and heated at 180° for 15 min to give a H<sub>2</sub>O-insol., light-brown, transparent film which was electrolessly plated with 0.3 μm Cu to give a film with surface resistance 4.0 Ω/.box..

IT 124036-01-7

RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for electroless plating, manufacture of)

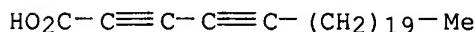
RN 124036-01-7 HCAPLUS

CN 2,4-Pentacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 124036-00-6

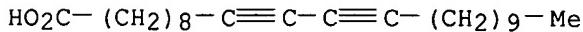
CMF C25 H42 O2 . 1/2 Cd



●1/2 Cd

L82 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1989:497836 HCAPLUS  
 DN 111:97836  
 TI Annealing effect of tricos-10,12-diynoic acid on the photopolymerizations in LB films  
 AU Shibasaki, Yoshio  
 CS Fac. Sci., Saitama Univ., Urawa, Japan  
 SO CACS Forum (1988), 8, 9-11  
 CODEN: CACFEJ  
 DT Journal  
 LA Japanese  
 AB The mol. orientation and the domain size change of tricos-10,12-diynoic acid Cd salt in Langmuir-Blodgett (LB) films after different thermal treatments were investigated in terms of x-ray diffraction patterns and

the change of its visible spectra by UV irradiation, resp.  
 IT 60705-84-2, Tricosa-10,12-diynoic acid cadmium salt  
 RL: USES (Uses)  
     (Langmuir-Bladgett films of, domain size and mol. orientation of,  
     annealing effect on)  
 RN 60705-84-2 HCAPLUS  
 CN 10,12-Tricosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)

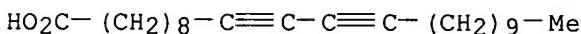


●1/2 Cd

IT 60705-85-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
     (Langmuir-Bladgett films of, preparation of, annealing effect on)  
 RN 60705-85-3 HCAPLUS  
 CN 10,12-Tricosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 60705-84-2  
 CMF C23 H38 O2 . 1/2 Cd



●1/2 Cd

L82 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1989:182968 HCAPLUS  
 DN 110:182968  
 TI X-ray lithographic resist with enhanced effective sensitivity  
 IN Tomita, Yoshinori; Sakai, Kunihiro; Matsuda, Hiroshi; Takimoto, Kiyoshi;  
     Okunuki, Masahiko; Kimura, Toshiaki  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62288824	A2	19871215	JP 1986-131761	19860609 <--
PRAI JP 1986-131761		19860609 <--		
AB The title resist contains (A) a layer containing a photosensitive material (M) responsive to x-rays and (B) a layer containing a fluorescent substance (S) emitting light to which M is sensitive by exposing to the x-rays, where A contains a monomol. film (or built-up monomol. film) of an organic compound containing M. Thus, a lithog. resist was prepared by using A containing laminated unimol. organic films containing Mn 10,12-pentacosadiynoate obtained from				

MnCl<sub>2</sub>.4H<sub>2</sub>O, KHCO<sub>3</sub>, and 10,12-pentacosadiynoic acid and B containing a polyimide and powdered Ca<sub>2</sub>MgSi<sub>2</sub>O<sub>7</sub> on an Sb-doped Si wafer and irradiated to x-rays (Rh La). The resist showed good sensitivity.

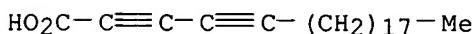
IT 85233-94-9 112680-04-3 120065-81-8

RL: USES (Uses)

(lithog. resist with monomol. film containing, and fluorescent layer for enhanced effective sensitivity)

RN 85233-94-9 HCPLUS

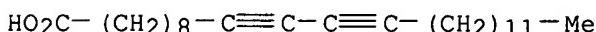
CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



●1/2 Mn(II)

RN 112680-04-3 HCPLUS

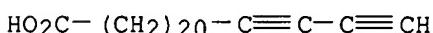
CN 10,12-Pentacosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



●1/2 Mn(II)

RN 120065-81-8 HCPLUS

CN 22,24-Pentacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

L82 ANSWER 17 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1988:601495 HCPLUS

DN 109:201495

TI X-ray lithographic resist with enhanced effective sensitivity

IN Tomita, Yoshinori; Takimoto, Kiyoshi; Saito, Kenji; Miyazaki, Toshihiko; Okunuki, Masahiko; Kimura, Toshiaki

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 62288822 A2 19871215 JP 1986-131759

PRAI JP 1986-131759 19860609 <--

AB The title resist contains a layer containing a photosensitive material responsive to radiation and a layer containing a fluorescent substance fluorescing on exposure to the above radiation, both layers containing

monomol. films or their built up films. Thus, a lithog. resist pattern was prepared by successively coating an Sb-doped Si wafer with a built up monomol. film system containing Mn 10,12-pentacosadiynoate obtained from MnCl<sub>2</sub>.4H<sub>2</sub>O, KHCO<sub>3</sub>, 10,12-pentacosadiynoic acid and a built up monomol. film system obtained from arachic acid, pattern-wise irradiating with x-rays, and developing. The resist showed good sensitivity.

IT 85233-94-9 112680-04-3 117197-27-0

RL: USES (Uses)

(lithog. resist with monomol. film containing, for enhanced effective sensitivity)

RN 85233-94-9 HCPLUS

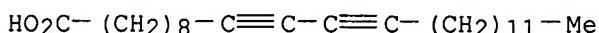
CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



●1/2 Mn(II)

RN 112680-04-3 HCPLUS

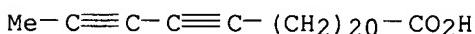
CN 10,12-Pentacosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



●1/2 Mn(II)

RN 117197-27-0 HCPLUS

CN 22,24-Hexacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

L82 ANSWER 18 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1988:550418 HCPLUS

DN 109:150418

TI Effect of secondary treatments on the phase transition of polydiacetylene LB films

AU Saito, Kazuhiro; Saito, Mitsuyoshi; Ikegami, Keiichi; Kuroda, Shinichi; Sugi, Michio

CS Electrotech. Lab., Ibaraki, 305, Japan

SO Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1988), 27(6), 1038-41

CODEN: JAPNDE

DT Journal

LA English

AB The photochromic behavior of polydiacetylene Langmuir-Blodgett (LB) films was investigated for samples with different secondary treatments. The monomer film is initially converted to the A-type polydiacetylene LB film

showing a pronounced red-shifted band and then to the B-type one, depending on the duration time of UV irradiation Acid vapor treatments, either before or after the initial UV irradiation, show a tendency to hinder the transition from A-type to B-type on the excessive UV irradiation, with the yield of A-type polymer being enhanced. Further, another type of red-shifted band was found in the case of a successive process; acid vapor treatment → heat treatment → UV irradiation, which may be dependent on the d.p. The relation between the results and the yield of polymerization of the films is explained by assuming an order-disorder scheme

of  
the phase transition.

IT 66990-51-0

RL: PRP (Properties)

(phase transition of Langmuir-Blodgett film of, effect of secondary treatments on, photochromism in relation to)

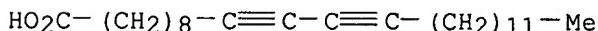
RN 66990-51-0 HCPLUS

CN 10,12-Pentacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 66990-50-9

CMF C25 H42 O2 . 1/2 Cd



●1/2 Cd

L82 ANSWER 19 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
AN 1988:177226 HCPLUS

DN 108:177226

TI High resolution pattern formation using diacetylene derivative monomolecular films

IN Tomita, Yoshinori; Takimoto, Kiyoshi; Eguchi, Takeshi; Saito, Kenji; Miyazaki, Toshihiko; Kimura, Toshiaki

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62232647 US 4798740	A2 A	19871013 19890117	JP 1986-77023 US 1987-30364	19860403 <-- 19870326 <--
PRAI	JP 1986-73111 JP 1986-73112 JP 1986-77023	A A A	19860331 19860331 19860403	<-- <-- <--	

AB The title patterning process involves (1) formation of monomol. film (or its build-up films) of a polymerizable monomer on a precoated substrate, and (2) patternwise impression of energy on the film to polym. the monomers. The monomol. film may contain a transition metal. The radiation-sensitive layer may be prepared such that the solubility of the layer shows periodic dependence on the amount of energy impressed on the layer. The precoating layer may be a conventional pos.- or neg.-working resist

layer. The monomer is preferably selected from diacetylene carboxylic acid derivs., and the transition metal is incorporated as the salt with the carboxylic acid. The patterning method gives high-resolution patterns with good sensitivity, and hence it is useful in semiconductor fabrication.

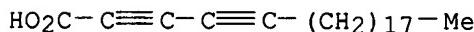
IT 85233-94-9 112680-04-3 114109-64-7

RL: USES (Uses)

(photoresist from, for high resolution pattern formation)

RN 85233-94-9 HCPLUS

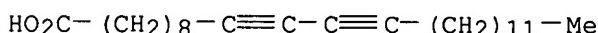
CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



● 1/2 Mn(II)

RN 112680-04-3 HCPLUS

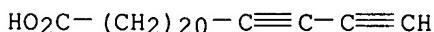
CN 10,12-Pentacosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



● 1/2 Mn(II)

RN 114109-64-7 HCPLUS

CN 22,24-Pentacosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



● 1/2 Mn(II)

L82 ANSWER 20 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1988:177225 HCPLUS

DN 108:177225

TI Patterning with built-up monomolecular films

IN Tomita, Yoshinori; Sakai, Kunihiro; Matsuda, Hiroshi; Kawada, Harunori; Eguchi, Takeshi; Kimura, Noriaki

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62229246	A2	19871008	JP 1986-73111	19860331 <--
	US 4798740	A	19890117	US 1987-30364	19870326 <--
PRAI	JP 1986-73111	A	19860331	<--	
	JP 1986-73112	A	19860331	<--	

JP 1986-77023 A 19860403 <--  
 AB Patterning is effected by (1) depositing a polymerizable thin film, consisting of a transition metal and a polymerizable compound and capable of yielding solvent-soluble- and solvent-insol.-states, and (2) exposing to energy beams (heat, near-UV, far-UV, electron beams, soft x-rays, x-rays) to form solvent-soluble and solvent-insol. regions in the shape of the desired pattern(s). The polymerizable compound is  $RC:CC:C(R1)nX$  ( $R, R1 = hydrophobic\ group; X = hydrophilic\ group; n = 0, 1$ ). Thus, a  $CHCl_3$  solution of  $C_{12}H_{25}C:CC:CC_7H_{14}CO_2H$  (I) was spread on an aqueous  $MnCl_2$  solution. After evaporation of the  $CHCl_3$ , a n-Si:Sb substrate was dipped in the solution while controlling the surface tension of the I monomol. film. After depositing 15 layers of the monomol. film, the dried film was patternwise scanned with electron beams of 0.4 and 8  $\mu C/m^2$  and developed with EtOH. High contrast images were obtained with a resolution of 0.2  $\mu$ .  
 IT 85233-94-9  
 RL: USES (Uses)  
 (monomol. films of, resist and coating materials from)  
 RN 85233-94-9 HCPLUS  
 CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



●1/2 Mn(II)

L82 ANSWER 21 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1988:177224 HCPLUS  
 DN 108:177224  
 TI Polymerizable thin films  
 IN Tomita, Yoshinori; Eguchi, Takeshi; Kawada, Harunori; Sakai, Kunihiro; Matsuda, Hiroshi; Kimura, Noriaki  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 3

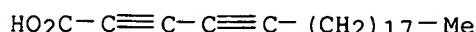
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	JP 62229240	A2	19871008	JP 1986-73112	19860331 <--	
	JP 06075194	B4	19940921			
	US 4798740	A	19890117	US 1987-30364	19870326 <--	
PRAI	JP 1986-73111	A	19860331	<--		
	JP 1986-73112	A	19860331	<--		
	JP 1986-77023	A	19860403	<--		
AB	A polymerizable thin film contains a transition metal and a polymerizable compound, and its soluble varies with the amount of energy input. The energy input is selected from heat, near-UV, far-UV, electron beams, soft x-rays, and x-rays, and the polymerizable compound is a diacetylene, $RC:CC:C(R1)nX$ [ $R, R1 = hydrophobic\ part; X = hydrophilic\ part; n = 0, 1$ ]. The material is useful in recording and as a resist. Thus, a built-up monomol. film of $C_{12}H_{25}C:CC:CC_7H_{14}CO_2H$ (I) was deposited on Si:Sb from I in contact with an aqueous $MnCl_2$ solution. After air drying, the film was scanned with electron beams (0.4, 8, 200 $\mu C/cm^2$ ) and developed with EtOH. High contrast patterns were obtained.					
IT	85233-94-9					

## RL: USES (Uses)

(monomol. film contg, resist from)

RN 85233-94-9 HCAPLUS

CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)

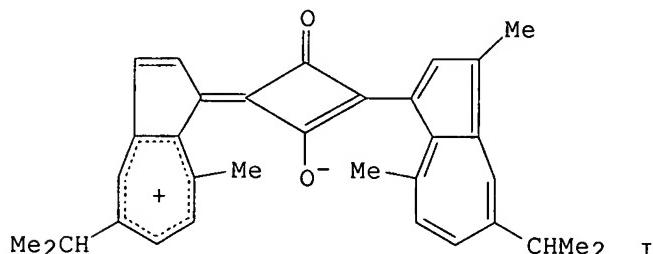


●1/2 Mn(II)

L82 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1987:626055 HCAPLUS  
 DN 107:226055  
 TI Optical recording medium  
 IN Nishimura, Yukio; Sakai, Kunihiro; Kawada, Harunori; Matsuda, Hiroshi;  
 Nakagiri, Takashi; Tomita, Yoshinori; Kimura, Toshiaki; Saito, Kenji;  
 Miyazaki, Toshihiko  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62046685	A2	19870228	JP 1985-187738	19850827 <--
PRAI JP 1985-187738		19850827 <--		

GI

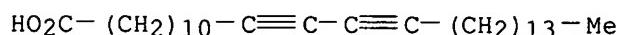


AB The title optical recording medium is composed of diacetylene derivative layers laminated with azulenium salt layers. The medium is capable of high-d., high-speed optical recording by using low-power semiconductor laser beams. Thus, glass plates were spin-coated with a solution of I in CH<sub>2</sub>Cl<sub>2</sub> to give 100, 200, 1000, 3000, and 6000 Å layers, which were then coated with a solution of C<sub>14</sub>H<sub>29</sub>C.tplbond.C.tplbond.CC<sub>10</sub>H<sub>20</sub>CO<sub>2</sub>Na to give 100, 200, 1000, 3000, and 6000 Å monomol. layers. After exposure to 254-nm light to turn them blue, these layers were exposed patternwise to an 830-nm beam from a 3-mW semiconductor laser. An excellent pattern was obtained with media having 200, 1000, or 3000 Å layers of each solution

IT 110968-18-8

RL: USES (Uses)

RN (optical recording material containing azulenium salt and)  
RN 110968-18-8 HCPLUS  
CN 12,14-Nonacosadiynoic acid, sodium salt (9CI) (CA INDEX NAME)

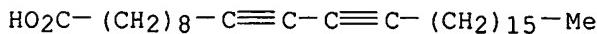


● Na

L82 ANSWER 23 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
AN 1983:613213 HCPLUS  
DN 99:213213  
TI Nonlinear susceptibility of Langmuir-Blodgett polydiacetylene thin films  
AU Kajzar, F.; Messier, J.; Zyss, J.  
CS CEN/SACLAY, Gif-sur-Yvette, 91191, Fr.  
SO Journal de Physique, Colloque (1983), (C3, Conf. Int. Phys. Chim. Polym. Conduct., 1982), 709-12  
CODEN: JPQCAK; ISSN: 0449-1947  
DT Journal  
LA English  
AB Third harmonic generation from thin films of a polydiacetylene [87933-98-0] prepared from [Me(CH<sub>2</sub>)<sub>16</sub>C.tplbond.C.tplbond.C(CH<sub>2</sub>)<sub>8</sub>CO<sub>2</sub>]<sub>2</sub> Cd were measured by transmission at 1.06 μ fundamental wavelength. The measured harmonic light intensity increased quadratically with the polymer film thickness up to .apprx.0.5 μ. The 3rd order nonlinear susceptibility for polymers with a different conjugation length ("blue" and "red" isomorphic forms) was nearly the same, i.e., .apprx.1.3 + 10-12 esu.  
IT 87933-98-0  
RL: PRP (Properties)  
(third-harmonic light intensity of films of, effect of film thickness and conjugation length on)  
RN 87933-98-0 HCPLUS  
CN 10,12-Nonacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 87933-97-9  
CMF C29 H50 O2 . 1/2 Cd

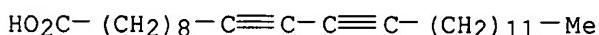


●1/2 Cd

L82 ANSWER 24 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
AN 1980:181728 HCPLUS  
DN 92:181728  
TI The photochemistry of the polymerization of diacetylenes in multilayers  
AU Fouassier, J. P.; Tieke, B.; Wegner, G.  
CS Inst. Makromol. Chem., Univ. Freiburg, Freiburg/Br., D-7800, Fed. Rep.

Ger.

SO Israel Journal of Chemistry (1980), Volume Date 1979, 18(3-4),  
227-32  
CODEN: ISJCAT; ISSN: 0021-2148  
 DT Journal  
 LA English  
 AB The quantum yield ( $\Phi$ ) for monochromatic (254 nm) irradiation of 10,12-pentacosadiynoic acid cadmium salt [66990-50-9] in multilayer polymerization (Langmuir-Blodgett technique) depends strongly on conversion ( $\Phi = 10.3 \pm 0.2$  at 25° at 0 conversion), is independent of light intensity and number of layers, and increases slightly (linearly) with increasing temperature (activation energy 4 ± 1 kcal/mol).  $\Phi$  Seems to decrease nearly linearly with increasing conversion and reaches about half its initial value at 65% conversion.  
 3,3'-Distearylthiacarbocyanine iodide [26078-55-7] sensitized the photopolymn., which occurred upon irradiation into the absorption band of the dye at  $\leq 600$  nm. At higher cyanine concns., when the dye dimerized or formed multimers, photopolymn. was quenched.  
 IT 66990-50-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization of, quantum yield of photochem.)  
 RN 66990-50-9 HCPLUS  
 CN 10,12-Pentacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)

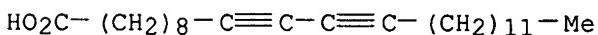


● 1/2 Cd

IT 66990-51-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, multilayer)  
 RN 66990-51-0 HCPLUS  
 CN 10,12-Pentacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

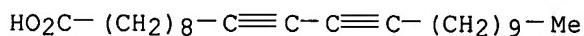
CRN 66990-50-9  
 CMF C25 H42 O2 . 1/2 Cd



● 1/2 Cd

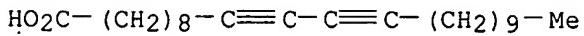
L82 ANSWER 25 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1979:593724 HCPLUS  
 DN 91:193724  
 TI Raman spectroscopic studies of the solid-state polymerization of diacetylenes, 3. UV-polymerization of diacetylene Langmuir-Blodgett multilayers  
 AU Tieke, Bernd; Bloor, David

CS Dep. Phys., Queen Mary Coll., London, E1 4NS, UK  
 SO Makromolekulare Chemie (1979), 180(9), 2275-8  
 CODEN: MACEAK; ISSN: 0025-116X  
 DT Journal  
 LA English  
 AB In the UV-initiated polymerization of Langmuir-Blodgett monolayers of Cd 10,12-tricosadiynoate [60705-84-2], Raman spectroscopy showed that phase changes involved an intermediate phase. The spectra contain peaks arising from polymer in regions of incomplete polymerization retaining the original structure, polymer in an intermediate phase formed at moderate conversion, and polymer disordered by the phase transition. The multilayers consist of ordered domains, but it is not clear whether these domains contain a single polymer form or a homogeneous mixture of forms.  
 IT 60705-84-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization of, photochem., in multilayers, Raman spectroscopy of)  
 RN 60705-84-2 HCAPLUS  
 CN 10,12-Tricosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



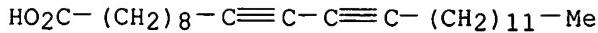
●1/2 Cd

L82 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1978:510549 HCAPLUS  
 DN 89:110549  
 TI The quantum yield of the topochemical photopolymerization of diacetylenes in multilayers  
 AU Tieke, Bernd; Wegner, Gerhard  
 CS Inst. Makromol. Chem., Univ. Freiburg, Freiburg/Br., Fed. Rep. Ger.  
 SO Makromolekulare Chemie (1978), 179(6), 1639-42  
 CODEN: MACEAK; ISSN: 0025-116X  
 DT Journal  
 LA English  
 AB The quantum yield in the topochem. photopolymn. of Me(CH<sub>2</sub>)<sub>n</sub>C.tpbond.CC.tpbond.C(CH<sub>2</sub>)<sub>8</sub>CO<sub>2</sub>H Cd salts (I; n = 9, 11, or 13) multilayers decreased markedly with increasing conversion. Math equations were derived for quantum yields obtained in polymerization of I at 254 nm.  
 IT 60705-84-2 66990-50-9 67132-60-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (photopolymn. of, in multilayers, quantum yield of)  
 RN 60705-84-2 HCAPLUS  
 CN 10,12-Tricosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



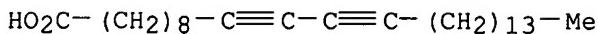
●1/2 Cd

RN 66990-50-9 HCAPLUS  
 CN 10,12-Pentacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

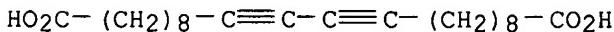
RN 67132-60-9 HCAPLUS  
 CN 10,12-Heptacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



●1/2 Cd

L82 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1976:46034 HCAPLUS  
 DN 84:46034  
 TI Self-sensitized, heat fixable polyynes  
 AU Bloom, Melvin S.; Thap Do Minh  
 CS UK  
 SO Research Disclosure (1975), 136, 44-5 (No. 13656)  
 CODEN: RSDSBB; ISSN: 0374-4353  
 DT Journal; Patent  
 LA English

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RD 136056		19750810		
PRAI	RD 1975-136056	19750810			
AB	Self-sensitized polyynes of general structure RZCO(CH <sub>2</sub> ) <sub>8</sub> C.tplbond.CC.tplbond.C(CH <sub>2</sub> ) <sub>8</sub> CO <sub>2</sub> R <sub>1</sub> (I), where R = 3(or 4)-PhCOC <sub>6</sub> H <sub>4</sub> , 4-MeCOC <sub>6</sub> H <sub>4</sub> , 4-BrC <sub>6</sub> H <sub>4</sub> COCH <sub>2</sub> , or 4-PhCH:CHCOC <sub>6</sub> H <sub>4</sub> , Z = O or NH, and R <sub>1</sub> = Me or R, were prepared and used in print-out systems which can be stabilized by heat against further print-out. Thus, MeO <sub>2</sub> C(CH <sub>2</sub> ) <sub>8</sub> C.tplbond.CC.tplbond.C(CH <sub>2</sub> ) <sub>8</sub> COCl [57120-20-4] was treated with 4-HOC <sub>6</sub> H <sub>4</sub> COPh [1137-42-4] to give I (R = 4-PhCOC <sub>6</sub> H <sub>4</sub> , Z = O, R <sub>1</sub> = Me) [57120-19-1]. The other I were similarly prepared				
IT	57120-18-0				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(reaction of, with dibromoacetophenone)				
RN	57120-18-0	HCAPLUS			
CN	10,12-Docosadiynedioic acid, dipotassium salt (9CI) (CA INDEX NAME)				



●2 K

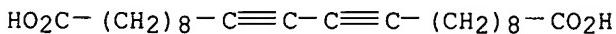
L82 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1974:444150 HCAPLUS

DN 81:44150  
 TI Sensitized compounds and elements  
 IN Ehrlich, Sanford H.  
 PA Eastman Kodak Co.  
 SO U.S., 8 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3811895	A	19740521	US 1972-217979	19720114 <--
PRAI US 1972-217979	A	19720114	<--	

AB The sensitivity of radiation-sensitive polyyne compds. is extended into the x-ray region by the use of organometallic sensitizers, such as triphenylbismuthine (I) and hexaphenyldilead (II). Thus, a composition containing the monomethyl ester of 10,12-docosadiynedioic acid 0.3, I 0.6, polystyrene 2.1 g, and PhMe 25 ml was coated on a poly(ethylene terephthalate) support to give a 30- $\mu$  thick layer (dry) and exposed to a direct x-ray source (50 kV, 40 mA, at 3-in.). A printout image d. of 0.43 was obtained vs. 0.02 for a I-free control.

IT 52892-21-4  
 RL: PRP (Properties)  
 (sensitization of, to x-rays, by hexaphenyldilead)  
 RN 52892-21-4 HCPLUS  
 CN 10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX NAME)



● Ba

L82 ANSWER 29 OF 29 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1969:426550 HCPLUS  
 DN 71:26550  
 TI Photographic material and a process for the formation of an image using that material

IN Cremeans, George E.; Foltz, Rodger L.; Trent, Donald E.  
 PA Battelle Development Corp.

SO Fr., 26 pp.  
 CODEN: FRXXAK

DT Patent  
 LA French

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1525738		19680517	FR 1967-109286	19670606 <--
DE 1547651			DE	
GB 1154191			GB	
US 3501297		19700317	US	19660606 <--
US 3501302		19700317	US	19660606 <--
US 3501303		19700317	US	19660606 <--
US 3679738		19720725	US	19700316 <--
PRAI US		19660606	<--	

AB A photosensitive system for receiving an image consists of photosensitive

crystals of a photosensitive crystalline polyacetylene compound held in a fixed position on a support. Visible images are formed directly by exposing the crystals to radiant energy so as to obtain a visible change in color in the irradiated portions of the crystal. The crystalline polyacetylene compound is a lower alc. ester of a dicarboxylic diacetylene compound in which the carboxy groups are at each end of the mol. The support bears a layer endowed with a good capability for the transmission of radiant energy which initiates a photosensitive response in the photosensitive crystals. The procedure for the direct formation of visible printed images consists in exposing the crystals to the action of radiant energy depending on the image to be formed, so as to obtain the initiation of a visible color change in the irradiated portions of the crystals. An image is formed at least in part by the portions of the crystals having had their color changed. The preferred esters and salts of polyacetylene compds. terminating in dicarboxylic groups have the structural formula; HO<sub>2</sub>C(CH<sub>2</sub>)<sub>m1</sub>(C.tplbond.C)<sub>n</sub>(CH<sub>2</sub>)<sub>m2</sub>CO<sub>2</sub>H, in which n is a whole number = 2, m<sub>1</sub> and m<sub>2</sub> are whole nos., preferably 6-9. The preferred compds. include: the dimethyl and diethyl esters of tetracosadiyne-11,13-dioic acid (I); dibenzyl ester of docosadiyne-10,12-dioic acid, dimethyl ester of hexadeca-7,9-dioic acid, etc. Thus, a small amount of I containing .apprx.20-30% of the monoethyl ester of I is dissolved in alc. The solution is poured into aqueous poly(vinyl alc.) with vigorous stirring. A suspension of finely divided crystals is obtained in the aqueous poly(vinyl alc.). When the suspension is spread onto the surface of a base or substrate, such as a sheet of white paper, and dried by mild heating, so as to evaporate the H<sub>2</sub>O and alc., a system consisting of a layer on the paper substrate, in which there is a layer of binder containing colorless crystals of the diacid diyne results. When the system is exposed to uv rays of  $\lambda = 2537\text{\AA}$ . the irradiated diacid diyne takes on a deep blue to purple color, and after a prolonged exposure takes on a bronze color which appears stable in the absence of an addnl. exposure to uv radiation at <50°. If the exposed material is heated above 120°, the blue-bronze product changes to a red color.

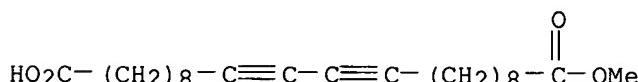
IT 24643-44-5 24643-45-6

RL: USES (Uses)

(photosensitive compns. containing)

RN 24643-44-5 HCPLUS

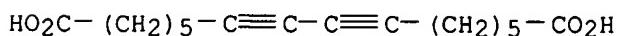
CN 10,12-Docosadiynedioic acid, monomethyl ester, potassium salt (8CI) (CA INDEX NAME)



● K

RN 24643-45-6 HCPLUS

CN 7,9-Hexadecadiynedioic acid, dipotassium salt (8CI) (CA INDEX NAME)



●2 K

=> fil uspatfull

FILE 'USPATFULL' ENTERED AT 09:14:17 ON 28 AUG 2006  
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 24 Aug 2006 (20060824/PD)

FILE LAST UPDATED: 24 Aug 2006 (20060824/ED)

HIGHEST GRANTED PATENT NUMBER: US7096505

HIGHEST APPLICATION PUBLICATION NUMBER: US2006191048

CA INDEXING IS CURRENT THROUGH 24 Aug 2006 (20060824/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 24 Aug 2006 (20060824/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2006

=> => d 184 bib abs hitstr tot

L84 ANSWER 1 OF 11 USPATFULL on STN

AN 2004:254158 USPATFULL

TI Composition and method for 3-dimensional mapping or radiation dose

IN Anyumba, Janette, Wayne, NJ, UNITED STATES

Lewis, David F., Monroe, CT, UNITED STATES

Shih, Hsiao-Yi, Whippany, NJ, UNITED STATES

Yu, Xiang, Bridgewater, NJ, UNITED STATES

PA ISP INVESTMENTS INC. (U.S. corporation)\

PI US 2004197684 A1 20041007

AI US 2004-812125 A1 20040329 (10)

PRAI US 2003-459559P 20030401 (60)

<--

DT Utility

FS APPLICATION

LREP Attn: William J. Davis, Esq., INTERNATIONAL SPECIALTY PRODUCTS, Legal Department, Building No. 10, 1361 Alps Road, Wayne, NJ, 07470

CLMN Number of Claims: 9

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 481

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

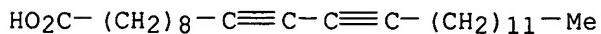
AB In accordance with this invention, there is provided a method of imaging, measuring and displaying a 3-dimensional dose distribution of an energy field in a translucent 3-dimensional object comprises: applying an energy field to the object such that the optical properties are changed upon receipt of the energy; optically scanning the object at various positions and angles to provide a series of 2-dimensional representations of the object; detecting the measuring light projection data indicative of optical changes in the object; calibrating the optical change in the object to the dose of the energy corresponding to each position scan; mapping the dose of the energy in the object and visually recording the summation of said 2-dimensional representations on an image display receiver comprising a radiation activated metal salt of a crystalline, thermochromic polyacetylene having a conjugated structure uniformly distributed in a rigid or high density semi-solid matrix by a color alteration due to polymerization of the activated polyacetylene to provide a permanent, 3-dimensional image of the object in high spatial resolution. The invention further provides image display receivers and radiation sensitive materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 66990-36-1P, Lithium pentacosa-10,12-diynoate

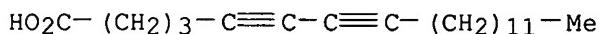
200412-03-9P, Lithium eicosa-5,7-diynoate  
 (composition and method for 3-dimensional mapping or radiation dose)

RN 66990-36-1 USPATFULL  
 CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 200412-03-9 USPATFULL  
 CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

L84 ANSWER 2 OF 11 USPATFULL on STN  
 AN 2001:11040 USPATFULL  
 TI Processless diacetylenic salt films capable of developing a black image  
 IN Lewis, David F., Monroe, CT, United States  
 Varma, Sangya S., Bedminster, NJ, United States  
 PA ISP Investments Inc., Wilmington, DE, United States (U.S. corporation)  
 PI US 6177578 B1 20010123 <--  
 AI US 1998-35607 19980305 (9) <--  
 RLI Continuation of Ser. No. US 1996-652144, filed on 23 May 1996, now  
 patented, Pat. No. US 5731112  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Carr, Deborah D.  
 LREP Goldberg, Jules E., Katz, Walter, Maue, Marilyn J.  
 CLMN Number of Claims: 7  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 1846  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB This invention relates to a mixture of imageable polyacetylenic compounds which have similar photosensitivities and which are visually imageable in complementary colors combinable to provide a black image, which mixture contains at least one polyacetylenic metal salt which produces a color, preferably a metal salt of a diacetylene C.sub.6 to C.sub.48 mono- or dicarboxylic acid, which is complementary to a color produced by another polyacetylenic metal salt or non-metallic polyacetylenic compound contained in the mixture or in an another integral color forming layer. The invention also pertains to the use of said mixture and the manner of its preparation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 IT 52892-21-4P 66990-36-1P, Lithium pentacosa-10,12-diynoate 200412-00-6P, Zinc bis(Pentacosa-10,12-diynoate) 200412-01-7P 200412-02-8P, Zinc bis(eicosa-5,7-diynoate) 200412-03-9P, Lithium eicosa-5,7-diynoate

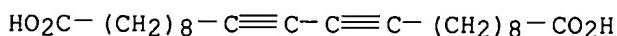
**200412-04-0P, Zinc bis(octadeca-5,7-diynoate)**

**200412-05-1P**

(processless diacetylenic salt films capable of developing black image)

RN 52892-21-4 USPATFULL

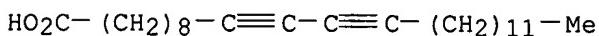
CN 10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX NAME)



● Ba

RN 66990-36-1 USPATFULL

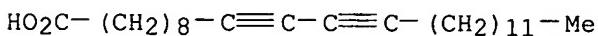
CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 200412-00-6 USPATFULL

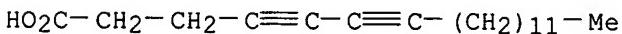
CN 10,12-Pentacosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-01-7 USPATFULL

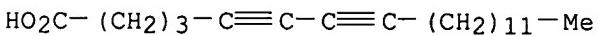
CN 4,6-Nonadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-02-8 USPATFULL

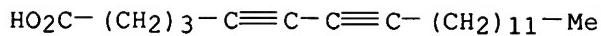
CN 5,7-Eicosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

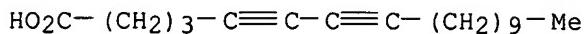
RN 200412-03-9 USPATFULL

CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



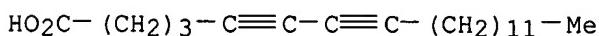
● Li

RN 200412-04-0 USPATFULL  
 CN 5,7-Octadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-05-1 USPATFULL  
 CN 5,7-Eicosadiynoic acid, barium salt (9CI) (CA INDEX NAME)



● 1/2 Ba

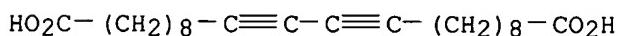
L84 ANSWER 3 OF 11 USPATFULL on STN  
 AN 1998:30825 USPATFULL  
 TI Processless diacetylenic salt films capable of developing a black image  
 IN Lewis, David F., Monroe, CT, United States  
 Varma, Sangya S., Bedminster, NJ, United States  
 PA ISP Investments Inc., Wilmington, DE, United States (U.S. corporation)  
 PI US 5731112 19980324 <--  
 AI US 1996-652144 19960523 (8) <--  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: McPherson, John A.  
 LREP Goldberg, Jules E., Maue, Marilyn J., Ward, Joshua J.  
 CLMN Number of Claims: 92  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 2268  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB This invention relates to a mixture of imageable polyacetylenic compounds which have similar photosensitivities and which are visually imageable in complementary colors combinable to provide a black image, which mixture contains at least one polyacetylenic metal salt which produces a color, preferably a metal salt of a diacetylene C.<sub>sub.6</sub> to C.<sub>sub.48</sub> mono- or dicarboxylic acid, which is complementary to a color produced by another polyacetylenic metal salt or non-metallic polyacetylenic compound contained in the mixture or in an another integral color forming layer. The invention also pertains to the use of said mixture and the manner of its preparation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 52892-21-4P 66990-36-1P, Lithium pentacosa-10,12-diynoate 200412-00-6P, Zinc bis(Pentacosa-10,12-diynoate) 200412-01-7P 200412-02-8P, Zinc bis(eicosa-5,7-diynoate) 200412-03-9P, Lithium eicosa-5,7-diynoate 200412-04-0P, Zinc bis(octadeca-5,7-diynoate) 200412-05-1P  
(processless diacetylenic salt films capable of developing black image)

RN 52892-21-4 USPATFULL

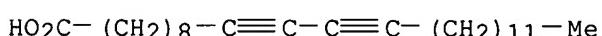
CN 10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX NAME)



● Ba

RN 66990-36-1 USPATFULL

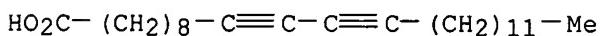
CN 10,12-Pentacosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 200412-00-6 USPATFULL

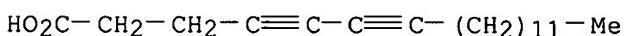
CN 10,12-Pentacosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-01-7 USPATFULL

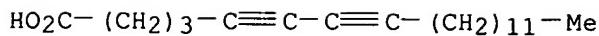
CN 4,6-Nonadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

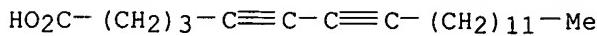
RN 200412-02-8 USPATFULL

CN 5,7-Eicosadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



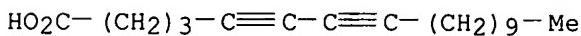
● 1/2 Zn

RN 200412-03-9 USPATFULL  
 CN 5,7-Eicosadiynoic acid, lithium salt (9CI) (CA INDEX NAME)



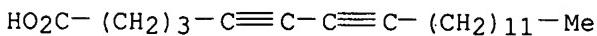
● Li

RN 200412-04-0 USPATFULL  
 CN 5,7-Octadecadiynoic acid, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

RN 200412-05-1 USPATFULL  
 CN 5,7-Eicosadiynoic acid, barium salt (9CI) (CA INDEX NAME)



● 1/2 Ba

L84 ANSWER 4 OF 11 USPATFULL on STN  
 AN 96:27267 USPATFULL  
 TI Homogeneous polymer blends comprising rigid rod shaped polymers and flexible polymers  
 IN Eisenbach, Claus D., Bayreuth, Germany, Federal Republic of  
     Fischer, Karl, Bayreuth, Germany, Federal Republic of  
     Hoffmann, Jorg, Bayreuth, Germany, Federal Republic of  
 PA Bayer Aktiengesellschaft, Leverkusen, Germany, Federal Republic of  
     (non-U.S. corporation)  
 PI US 5504157    <--  
 AI US 1995-370935    <--  
 PRAI DE 1994-4401217    <--  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Hamilton, III, Thomas  
 LREP Gil, Joseph C., Preis, Aron  
 CLMN Number of Claims: 3  
 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 381

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A homogeneous polymer blend is disclosed containing components A and B. Accordingly A is about 1 to 30% by weight of a rigid, rod-shaped polymer having a persistence length of at least 10 nm and a ratio of molecular length to molecular diameter of at least 30, and B) is about 70 to 99% by weight of a flexible polymer which contains at least one member selected from the group consisting of non-ionic polar groups, ionic groups and groups convertible into ions. The flexible polymer is any one of polyolefins, polyacrylates, polyamides and polyurethanes. Component A) contains at least one chemically fixed member selected from the group consisting of non-ionic polar group, ionic group and a group convertible into ionic group, in an amount sufficient to render said A) and B) compatible one with the other.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 169762-41-8

(blends with styrene-vinylbenzoate copolymers; compatible homogeneous blends from rigid rod polymers and flexible polymers)

RN 169762-41-8 USPATFULL

CN 5,7-Dodecadiynedioic acid, homopolymer, potassium salt (9CI) (CA INDEX NAME)

CM 1

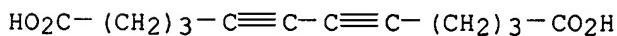
CRN 81772-20-5

CMF (C<sub>12</sub> H<sub>14</sub> O<sub>4</sub>)<sub>x</sub>

CCI PMS

CM 2

CRN 28393-04-6

CMF C<sub>12</sub> H<sub>14</sub> O<sub>4</sub>

L84 ANSWER 5 OF 11 USPATFULL on STN

AN 94:55387 USPATFULL

TI Ink composition and components thereof

IN Bratchley, Robin, Berkshire, England

Nugent, Nicholas O., Hampshire, England

Ellis, Linda S., Wolverhampton, England

PA Thomas de la Rue and Company Limited, London, England (non-U.S. corporation)

PI US 5324567 19940628 &lt;--

WO 9111492 19910808 &lt;--

AI US 1992-910343 19920724 (7) &lt;--

WO 1990-GB2033 19901228 &lt;--

19920724 PCT 371 date

19920724 PCT 102(e) date

PRAI GB 1990-2360 19900202 &lt;--

DT Utility

FS Granted

EXNAM Primary Examiner: Ryan, Patrick J.; Assistant Examiner: Macholl, Marie R.

LREP Oliff &amp; Berridge

CLMN Number of Claims: 21  
 ECL Exemplary Claim: 21  
 DRWN No Drawings  
 LN.CNT 584

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

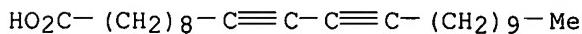
AB Raman-active compounds such as polydiacetylenes are provided in the form of particles whose maximum dimension is 40  $\mu\text{m}$ . They can be formulated into inks, for the purpose of printing on security documents which are thus readily capable of authentication.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 67360-64-9  
 (Raman-active, for thermochromic inks, for printing security documents)  
 RN 67360-64-9 USPATFULL  
 CN 10,12-Tricosadiynoic acid, lithium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 67360-63-8  
 CMF C23 H38 O2 . Li



● Li

L84 ANSWER 6 OF 11 USPATFULL on STN  
 AN 91:82285 USPATFULL  
 TI Metal-containing organic polymer  
 IN Kawata, Ken, Kanagawa, Japan  
     Sato, Kozo, Kanagawa, Japan  
     Tsuboi, Masayoshi, Kanagawa, Japan  
 PA Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)  
 PI US 5055537 19911008 <--  
 AI US 1990-491907 19900312 (7) <--  
 RLI Division of Ser. No. US 1988-214062, filed on 1 Jul 1988, now patented,  
     Pat. No. US 4927897  
 PRAI JP 1987-166116 19870702 <--  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Schofer, Joseph L.; Assistant Examiner: Smith, Jeffrey T.  
 LREP Sughrue, Mion, Zinn, Macpeak & Seas  
 CLMN Number of Claims: 7  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 720  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB A metal-containing organic polymer produced by the step of polymerizing a compound represented by formula (I):

$(\text{R}--\text{C.tbd.C})\text{.sub.1}.\text{sub. k k }(\text{L}) \text{ (S).sub.m}$  (I)

wherein

S represents a hydrogen atom, a hydroxy group, an amino group, a mercapto group, a polyoxyether group, a polyaminoether group, a polythioether group, a sulfino group or a salt thereof, a sulfo group or a salt thereof, a carboxyl group or a salt thereof or a polymerizable group;

R represents a metallic atom, a hydrogen atom, or a group --COOM wherein M represents a hydrogen atom or a metallic atom;

provided that when R represents a carboxyl group or a hydrogen atom, said compound represented by formula (I) is polymerized in the presence of a metallic salt;

L represents a chemical bond or a group having a valency of (k+m); and

l, k and m each represents an integer of 1 or more.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 124036-01-7

(catalysts, for electroless plating, manufacture of)

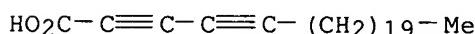
RN 124036-01-7 USPATFULL

CN 2,4-Pentacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 124036-00-6

CMF C25 H42 O2 . 1/2 Cd



●1/2 Cd

L84 ANSWER 7 OF 11 USPATFULL on STN

AN 91:25274 USPATFULL

TI Method using x-rays to determine thickness of organic films

IN Okada, Shuji, Tsukuba, Japan

Matsuda, Hiro, Tsukuba, Japan

Nakanishi, Hachiro, Tsukuba, Japan

Kato, Masao, Tsukuba, Japan

PA Agency of Industrial Science & Technology, Tokyo, Japan (non-U.S. government)

Ministry of International Trade & Industry, Tokyo, Japan (non-U.S. government)

PI US 5003569 19910326 <--

AI US 1990-493322 19900314 (7) <--

PRAI JP 1989-66929 19890317 <--

DT Utility

FS Granted

EXNAM Primary Examiner: Westin, Edward P.; Assistant Examiner: Wong, Don

LREP Oblon, Spivak, McClelland, Maier & Neustadt

CLMN Number of Claims: 4

ECL Exemplary Claim: 1

DRWN 4 Drawing Figure(s); 3 Drawing Page(s)

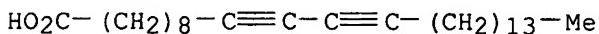
LN.CNT 298

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A thickness determination method for organic films comprises the steps of: irradiating an organic film to be measured with x-rays at a certain angle of incidence, finding an angle of reflection at which the x-ray intensity reaches a peak, and finding the thickness of the film from the angle of this peak.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 67132-60-9, Cadmium heptacosa-10,12-diynoate  
     (determination of thickness of films of, x-ray method for)  
 RN 67132-60-9 USPATFULL  
 CN 10,12-Heptacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



● 1/2 Cd

L84 ANSWER 8 OF 11 USPATFULL on STN

AN 91:18362 USPATFULL  
 TI Optical wavelength converting device and manufacturing method thereof  
 IN Nishio, Yoshitaka, Osaka, Japan

Hamada, Yuji, Osaka, Japan  
 Fujii, Takanori, Hyogo, Japan  
 Sakata, Masakazu, Osaka, Japan  
 Tsujino, Yoshikazu, Osaka, Japan  
 Kuroki, Kazuhiko, Kyoto, Japan

PA Sanyo Electric Co., Ltd., Osaka, Japan (non-U.S. corporation)

PI US 4997244 19910305 <--

AI US 1989-438162 19891116 (7) <--

PRAI JP 1988-311369 19881208 <--

DT Utility

FS Granted

EXNAM Primary Examiner: Lee, John D.

LREP Darby & Darby

CLMN Number of Claims: 9

ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 2 Drawing Page(s)

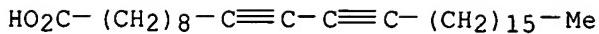
LN.CNT 199

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An optical wavelength converting device includes a substrate, and a waveguide layer of a nonlinear organic material formed on one major surface of the substrate and having a thickness tapered along one axis parallel to the major surface, in which a waveguide with a desired thickness can be selected in a direction normal to the axis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 87933-97-9  
     (films, in optical frequency converter multilayer waveguide structures)  
 RN 87933-97-9 USPATFULL  
 CN 10,12-Nonacosadiynoic acid, cadmium salt (9CI) (CA INDEX NAME)



● 1/2 Cd

L84 ANSWER 9 OF 11 USPATFULL on STN  
 AN 90:40631 USPATFULL  
 TI Metal-containing organic polymer and use thereof  
 IN Kawata, Ken, Kanagawa, Japan  
     Sato, Kozo, Kanagawa, Japan  
     Tsuboi, Masayoshi, Kanagawa, Japan  
 PA Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation)  
 PI US 4927897 19900522 <--  
 AI US 1988-214062 19880701 (7) <--  
 PRAI JP 1987-166116 19870702 <--  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Schofer, Joseph L.; Assistant Examiner: Smith, Jeffrey T.  
 LREP Sughrue, Mion, Zinn, Macpeak & Seas  
 CLMN Number of Claims: 24  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 777  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB A metal-containing organic polymer produced by the step of polymerizing a compound represented by formula (I):

(R--C.tbd.C.sub.1k S).sub.m (I)

wherein

S represents a hydrogen atom, a hydroxy group, an amino group, a mercapto group, a polyoxyether group, a polyaminoether group, a polythioether group, a sulfino group or a salt thereof, a sulfo group or a salt thereof, a carboxyl group or a salt thereof or a polymerizable group;

R represents a metallic atom, a hydrogen atom, or a group --COOM wherein M represents a hydrogen atom or a metallic atom;

provided that when R represents a carboxyl group or a hydrogen atom, said compound represented by formula (I) is polymerized in the presence of a metallic salt;

L represents a chemical bond or a group having a valency of (k+m); and l, k and m each represents an integer of 1 or more.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 124036-01-7

(catalysts, for electroless plating, manufacture of)

RN 124036-01-7 USPATFULL

CN 2,4-Pentacosadiynoic acid, cadmium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 124036-00-6  
CMF C25 H42 O2 . 1/2 Cd



● 1/2 Cd

R--C.tbd.C--C.tbd.C--(R.sub.1).sub.n --X

wherein R and R<sub>sub</sub>1 are hydrophobic sites, X is a hydrophilic site, and n is 0 or 1. This polymerizable film is useful as recording materials and resist materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 85233-94-9

(monomol. film contg. resist from)

RN 85233-94-9 USPATFULL

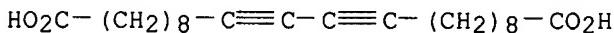
CN 2,4-Tricosadiynoic acid, manganese(2+) salt (9CI) (CA INDEX NAME)



● 1/2 Mn(II)

L84 ANSWER 11 OF 11 USPATFULL on STN  
 AN 74:24886 USPATFULL  
 TI SENSITIZED COMPOUNDS AND ELEMENTS  
 IN Ehrlich, Sanford H., Rochester, NY, United States  
 PA Eastman Kodak Company, Rochester, NY, United States (U.S. corporation)  
 PI US 3811895 19740521 <--  
 AI US 1972-217979 19720114 (5) <--  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Torchin, Norman G.; Assistant Examiner: Schilling,  
 Richard L.  
 LREP Lewis, James L.  
 CLMN Number of Claims: 22  
 DRWN No Drawings  
 LN.CNT 712  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB The sensitivity of radiation-sensitive polyyne compounds may be extended  
 to wavelengths in the x-ray region by the use of organometallic  
 sensitizers, such as triphenylbismuthine and hexaphenyldilead, for  
 example. High-speed direct-imaging x-ray elements may thus be obtained.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 IT 52892-21-4  
 (sensitization of, to x-rays, by hexaphenyldilead)  
 RN 52892-21-4 USPATFULL  
 CN 10,12-Docosadiynedioic acid, barium salt (1:1) (9CI) (CA INDEX NAME)



● Ba

=> d his

(FILE 'HOME' ENTERED AT 08:13:01 ON 28 AUG 2006)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 08:13:19 ON 28 AUG 2006  
 L1 3 S US20040197684/PN OR (US2004-812125# OR US2003-459559#)/AP, PRN  
 E ANYUMBA/AU  
 L2 4 S E4  
 E LEWIS/AU  
 L3 2 S E3  
 E LEWIS D/AU  
 L4 370 S E3, E14  
 E LEWIS DAVE/AU

L5           406 S E3,E4,E23-E28  
        E SHIH/AU  
L6           2 S E3  
        E SHIH H/AU  
L7           45 S E3,E19  
        E SHIH HSIAO/AU  
L8           20 S E6,E7  
        E SHIH NAME/AU  
L9           1 S E4  
        E HSIAO/AU  
        E HSIAO Y/AU  
L10          38 S E3,E30  
        E HSIAOYI/AU  
        E HSIAO NAME/AU  
L11          3 S E4  
        E YU/AU  
L12          2 S E3  
        E YU X/AU  
L13          472 S E3-E26,E33  
L14          469 S YU XIANG?/AU  
        E YU NAME/AU  
L15          6 S E4  
        E XIANG/AU  
L16          1 S E3  
        E XIANG Y/AU  
L17          69 S E3-E10  
L18          271 S XIANG YU?/AU  
        E XIANG NAME/AU  
        E ISP/PA,CS  
L19          8896 S ISP?/PA,CS  
L20          3 S L1 AND L2-L19  
        SEL RN

FILE 'REGISTRY' ENTERED AT 08:17:38 ON 28 AUG 2006

L21          20 S E1-E20  
L22           STR  
L23          50 S L22  
L24          22444 S L22 FUL  
        SAV TEMP L24 LEE812/A  
L25           STR L22  
L26          50 S L25 CSS SAM SUB=L24  
L27           STR L22  
L28          50 S L27 CSS SAM SUB=L24  
L29          2678 S L25 CSS FUL SUB=L24  
        SAV TEMP L29 LEE812A/A  
L30          2620 S L29/COM  
L31          10 S L21 AND L30  
L32          4 S L31 AND LI/ELS  
L33          13 S L30 AND LI/ELS  
L34          12 S L33 NOT CCS/CI  
L35           SCR 2127 AND 1918  
L36          9 S L35 SAM SUB=L30  
L37           SCR 2050 OR 2049  
L38          6 S L35 NOT L37 SAM SUB=L30  
L39          152 S L35 NOT L37 FUL SUB=L30  
        SAV L39 TEMP L33812B/A  
L40          141 S L39 NOT L32,L34  
L41          136 S L40 AND 2/NC  
L42          126 S L41 NOT (OC4 OR NC5 OR C6)/ES  
L43          5 S L40 NOT L41

SEL RN L43 4 5  
 L44 2 S E21,E22  
 L45 10 S L41 NOT L42  
 SEL RN L45 4 5 6  
 L46 3 S E23-E25  
 L47 5 S L42 AND (C18H18O4 OR C24H22O4 OR C4H2 OR C13H10O2)  
 L48 121 S L42 NOT L47  
 L49 138 S L32,L34,L44,L46,L48  
 L50 15 S L39 NOT L49  
 L51 156 S (886-66-8 OR 4572-12-7 OR 29768-12-5 OR 66990-32-7 OR 20264-5  
 L52 137 S L49 NOT BF4  
 SAV L52 TEMP L33812C/A  
 L53 105 S L30 AND (C4H2 OR C6H2 OR C8H2)  
 L54 69 S L53 AND NC>=2

FILE 'HCAOLD' ENTERED AT 09:00:10 ON 28 AUG 2006  
 L55 2 S L52  
 SEL AN  
 EDIT E26-E27 /AN /OREF

FILE 'HCAPLUS' ENTERED AT 09:00:33 ON 28 AUG 2006  
 L56 2 S E26-E27  
 L57 127 S L52  
 L58 1 S L56 AND L57  
 L59 2 S L56,L58  
 L60 126 S L57 NOT L59  
 L61 4 S L60 AND L1-L20  
 L62 118 S L60 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)  
 L63 114 S L62 NOT L59,L61  
 E RADIATION DETECT/CT  
 L64 20432 S E4-E65  
 E E4+ALL  
 L65 110004 S E4+OLD,NT  
 L66 730732 S E54+OLD,NT  
 E E51+ALL  
 L67 34503 S E2+NT OR E7+OLD,NT  
 E PHOTOCHROM/CT  
 L68 9165 S E12+OLD,NT OR E23+OLD,NT OR E30+OLD,NT OR E31+OLD,NT  
 E OPTICAL IMAGING/CT  
 L69 133709 S E4+OLD,NT  
 L70 3396 S E61+OLD,NT  
 E E3+ALL  
 L71 222818 S E2+OLD,NT  
 E FILAMENT/CT  
 L72 2516 S E35+OLD,NT  
 L73 10 S L57 AND L64-L72  
 L74 13 S L59,L61,L73  
 L75 19 S L57 AND RAD?/SC,SX  
 L76 6 S L75 AND L74  
 L77 13 S L75 AND (PY<=2003 OR PRY<=2003 OR AY<=2003) NOT L76  
 L78 26 S L74,L76,L77 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)  
 L79 18 S L63 AND P/DT  
 L80 16 S L79 NOT (CARBOHYDRAT? OR DETERGENT?)/SC,SX  
 L81 31 S L78,L80  
 L82 29 S L81 NOT L59

FILE 'USPATFULL' ENTERED AT 09:12:10 ON 28 AUG 2006  
 L83 13 S L52  
 L84 11 S L83 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)

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FILE 'REGISTRY' ENTERED AT 09:12:28 ON 28 AUG 2006

FILE 'HCAOLD' ENTERED AT 09:12:41 ON 28 AUG 2006

FILE 'HCAPLUS' ENTERED AT 09:13:39 ON 28 AUG 2006

FILE 'USPATFULL' ENTERED AT 09:14:17 ON 28 AUG 2006

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